

axis is a vertical circle for elevations reading to half minutes. The zeros of the azimuth plates are made to correspond with the direction of the base line and read from the south through the west completely around the circle. The method of taking the observations is as follows: The chief observer selects some well defined point of a cloud and telephones its position and other information as to its situation and form to the observer at the other station, and on his identifying it the two observers, upon a telephone signal, sight it at the same instant of time. The time is recorded; the two altitudes and azimuths are then read, and the cloud is allowed to drift on as long as the selected point retains its form when a second pointing is taken and altitudes and azimuths are read and time interval ascertained. This interval varies at different observations from about 40 seconds to 8 or 10 minutes. Here comes in the great uncertainty of this kind of observation, the lower cumulus clouds of about 1,000 meters elevation present, as a rule, well-defined points, but these change so rapidly, and their aspect as viewed from the two stations are so different, that at times it is almost impossible to get a good observation. In fact the observer, after reading his angles in many cases, can not identify the point he has selected (although well defined at the time) after an interval of only thirty seconds, and notwithstanding the fact that he looks occasionally at the cloud during the operation of reading the instrument.

Stratus clouds, as a rule, are difficult to observe. Rifts appearing here and there afford chances, but these change so much that not more than a minute or a minute and a half can be depended upon for a time interval.

The higher cirrus clouds, especially when there are any signs of nuclei, present a fair field for observations, but being so far distant they require pretty accurate pointing.

The uncertainties of the pointings on the clouds mask any small changes taking place in the instrument, such as changes in the level, and these are taken no notice of after the instruments are once adjusted and occasionally verified.

Station *B* is some 20 meters lower than *A*, but the station is assumed to be in the same plane as *A*, to simplify the calculations. Four observations are thus made, two at each station, from which four heights the velocity and direction of the clouds are obtained. Generally the heights, etc., of the higher clouds are calculated, but the lower clouds and alto-cumuli of about 4,000 meters are plotted on a specially made table, the base line being laid down on a scale of about

300 meters to the inch, using two protractors of three feet radius with vernier reading to minutes, having their centers at each of the stations. The vernier is attached to a movable arm, which can be applied to either station. The angles as read by the instruments are plotted on the table, and the heights, distances, and directions scaled off.

Not much photography has been done as yet, it having been found that in practice great difficulty is encountered in keeping the cameras in adjustment. These cameras were mounted primarily to act as an auxiliary in confirming the accuracy of the pointings of the telescopic tubes and to help in the classification of clouds and show any peculiarity in their formation. By constant practice the observers have become familiar with the descriptions of the clouds and the points to be taken, so that now comparatively few failures result from a misunderstanding of directions, thus rendering photographic work less necessary.

During December, January, and February the weather here has been very cloudy, affording few opportunities for observation.

Roughly speaking, the higher cirrus during September and October was found to move from the direction of about N. 40° W., while through November, December, January, and February they shifted to N. 65° W., at elevations ranging between 8,140 to 10,300 meters and traveled at velocities varying from 60 to 113 miles per hour. The highest cirrus measured was on September 24, at an altitude of 10,300 meters, with a velocity of 79 miles per hour, moving from N. 39° 13' W., while the lowest was at 8,140 meters, moving at 55 miles per hour from N. 64° W., on October 29.

Medium-height clouds, such as alto-cumulus, cirro-stratus, etc., seem to occupy heights of from 4,000 to 7,000 meters, traveling in directions varying between S. 50° W. and N. 50° W., at velocities of from 30 to 70 miles per hour.

Lower cumulus clouds generally come from the southwest and northwest at altitudes of 1,200 to 2,500 meters and velocities of 10 to 45 miles per hour.

Of the lower cloud drift, such as scud, some observations have been obtained at elevations of 600 to 1,000 meters, with velocities of about 25 miles per hour.

A sufficient number of observations has not as yet been obtained to afford data on which to base satisfactory conclusions, but it is hoped that during the year great progress will be made both in the instrumental and photographic method.

METEOROLOGICAL TABLES.

By A. J. HENRY, Chief of Division of Records and Meteorological Data.

Table I gives, for about 130 Weather Bureau stations making two observations daily and for about 20 others making only the 8 p. m. observation, the data ordinarily needed for climatological studies, viz., the monthly mean pressure, the monthly means and extremes of temperature, the average conditions as to moisture, cloudiness, movement of the wind, and the departures from normals in the case of pressure, temperature, and precipitation; the altitudes above ground, the total depth of snowfall, and the mean wet-bulb temperatures are now given.

Table II gives, for about 2,400 stations occupied by voluntary observers, the extreme maximum and minimum temperatures, the mean temperature deduced from the average of all the daily maxima and minima, or other readings, as indicated by the numeral following the name of the station; the total monthly precipitation, and the total depth in inches of any snow that may have fallen. When the spaces in the snow column are left blank it indicates that no snow has

fallen, but when it is possible that there may have been snow of which no record has been made, that fact is indicated by leaders, thus (....).

Table III gives, for about 30 Canadian stations, the mean pressure, mean temperature, total precipitation, prevailing wind, and the respective departures from normal values. Reports from Newfoundland and Bermuda are included in this table for convenience of tabulation.

Table IV gives detailed observations at Honolulu, Republic of Hawaii, by Curtis J. Lyons, meteorologist to the Government Survey.

Table V gives, for 26 stations, the mean hourly temperatures deduced from thermographs of the pattern described and figured in the Report of the Chief of the Weather Bureau, 1891-'92, p. 29.

Table VI gives, for 26 stations, the mean hourly pressures as automatically registered by Richard barographs, except for Washington, D. C., where Foreman's barograph is in use.

Both instruments are described in the Report of the Chief of the Weather Bureau, 1891-'92, pp. 26 and 30.

Table VII gives, for about 130 stations, the arithmetical means of the hourly movements of the wind ending with the respective hours, as registered automatically by the Robinson anemometer, in conjunction with an electrical recording mechanism, described and illustrated in the Report of the Chief of the Weather Bureau, 1891-'92, p. 19.

Table VIII gives, for all stations that make observations at 8 a. m. and 8 p. m., the four component directions and the resultant directions based on these two observations only and without considering the velocity of the wind. The total movement for the whole month, as read from the dial of the Robinson anemometer, is given for each station in Table I. By adding the four components for the stations comprised in any geographical division one may obtain the average resultant direction for that division.

Table IX gives the total number of stations in each State from which meteorological reports of any kind have been received, and the number of such stations reporting thunderstorms (T) and auroras (A) on each day of the current month.

Table X gives, for 56 stations, the percentages of hourly sunshine as derived from the automatic records made by two essentially different types of instruments, designated, respectively, the thermometric recorder and the photographic recorder. The kind of instrument used at each station is indicated in the table by the letter T or P in the column following the name of the station.

Table XI gives a record of rains whose intensity at some period of the storm's continuance equaled or exceeded the following rates:

Duration, minutes..	5	10	15	20	25	30	35	40	45	50	60	80	100	120
Rates pr. hr. (ins.)..	3.00	1.80	1.40	1.20	1.08	1.00	0.94	0.90	0.86	0.84	0.75	0.60	0.54	0.50

In the northern part of the United States, especially in the colder months of the year, rains of the intensities shown in the above table seldom occur. In all cases where no storm of sufficient intensity to entitle it to a place in the full table has occurred the greatest rainfall of any single storm has been given, also the greatest hourly fall during that storm.

Table XII gives the record of excessive precipitation at all stations from which reports are received.

NOTES EXPLANATORY OF THE CHARTS.

Chart I.—Tracks of centers of high pressure. The roman letters show number and order of centers of high areas. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the 8 a. m. and 8 p. m., seventy-fifth meridian time, observations. The queries (?) on the tracks show that the centers could not be satisfactorily located. Within each circle is given the highest barometric reading reported near the center. A blank indicates that no reports were available. A wavy line indicates the axis of a ridge of high pressure.

Chart II.—Tracks of centers of low pressure. The roman letters show number and order of centers of low areas. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the 8 a. m. and 8 p. m., seventy-fifth meridian time, observations. The queries (?) on the tracks show that the centers could not be satisfactorily located. Within each circle is given the lowest barometric reading reported near the center. A blank indicates that no reports were available. A wavy line indicates the axis of a trough or long oval area of low pressure.

Chart III.—Total precipitation. The scale of shades showing the depth of rainfall is given on the chart itself. For isolated stations the rainfall is given in inches and tenths, when appreciable; otherwise, a "trace" is indicated by a capital T, and no rain at all, by 0.0.

Chart IV.—Sea-level isobars, surface isotherms, and resultant winds. The wind directions on this Chart are the computed resultants of observations at 8 a. m. and 8 p. m., daily; the resultant duration is shown by figures attached to each arrow. The temperatures are the means of daily maxima and minima and are not reduced to sea level. The pressures are the means of 8 a. m. and 8 p. m. observations, daily, and correspond to Professor Hazen's system of reduction; the barometer is not reduced to standard gravity, but the necessary reduction for 30 inches of the mercurial barometer is shown by the marginal figures for each degree of latitude.

Chart V.—Total snowfall, with the isotherms of minimum 32° F., and minimum 40° F.

Chart VI.—Depth of snow on ground at close of month.

Chart VII.—Curves of probable maximum intensity of rainfall.

TABLE I.—Climatological data for Weather Bureau Stations, January, 1897.

Stations.	Elevation of instruments.		Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.										Precipitation, in inches.		Wind.																					
	Barometer above sea level, feet.		Mean actual, 8 a.m. and 8 p.m. + 2° above ground.		Departure from normal.					Mean maximum.					Mean minimum.		Greatest daily range.		Total.		Departure from normal.		Days with 0.1 or more.		Total movement, miles.		Prevailing direction.		Maximum velocity.									
	Thermometers above ground.		Mean reduced.		Departure from normal.					Mean maximum.					Mean minimum.		Mean wet thermometer.		Mean temperature of the dew-point.		Mean relative humidity, per cent.		Total.		Miles per hour.		Direction.		Date.									
New England.																																						
Eastport	76	69	74	29.90	30.00	+ .00	26.8	+ 0.5	21.2	+ 0.9	23.6	+ 3.5	16.2	+ 1.4	30.8	+ 0.1	30.8	+ 0.5	53	+ 14	19	37	19	14	74	3.57	- 0.4	13	10,843	n.w.	66	e.	26	9	9	13	6.5	16.2
Portland, Me.	103	81	89	29.89	30.00	+ .06	23.6	+ 3.5	29.7	+ 0.5	29.0	+ 0.6	16.3	+ 1.4	30.4	+ 0.2	30.4	+ 0.5	51	+ 18	19	36	21	17	77	4.09	+ 0.5	8	6,308	n.w.	36	s.	26	10	13	5.1	16.8	
Northfield	872	15	59	29.07	30.08	+ .01	26.4	+ 1.4	29.1	+ 0.5	29.0	+ 0.6	16.3	+ 1.4	30.5	+ 0.1	30.5	+ 0.5	50	+ 21	21	34	25	20	70	3.46	+ 0.5	5	6,281	s.	44	n.e.	26	17	16	5.6	17.0	
Boston	125	115	181	29.91	30.05	+ .03	28.4	+ 3.0	29.4	+ 0.5	29.4	+ 0.6	16.3	+ 1.4	30.5	+ 0.1	30.5	+ 0.5	50	+ 25	25	35	25	20	70	2.59	+ 1.1	12	10,218	n.w.	48	n.w.	26	18	16	6.5	17.5	
Nantucket	14	43	54	30.04	30.05	+ .01	30.8	+ 0.1	33.4	+ 1.9	33.4	+ 2.6	30.8	+ 0.1	33.4	+ 0.1	33.4	+ 0.5	53	+ 28	28	32	25	20	82	3.46	+ 0.5	2	12,736	w.	56	w.	26	18	16	6.5	17.5	
Woods Hole	51	57	57	30.04	30.05	+ .01	33.4	+ 1.9	33.4	+ 2.6	33.4	+ 2.6	30.8	+ 0.1	33.4	+ 0.1	33.4	+ 0.5	53	+ 28	28	32	25	20	82	3.46	+ 0.5	7	12,736	w.	56	w.	26	18	16	6.5	17.5	
Vineyard Haven	20	39	48	30.07	30.10	+ .01	30.4	+ 0.8	33.4	+ 1.9	33.4	+ 2.6	30.8	+ 0.1	33.4	+ 0.1	33.4	+ 0.5	53	+ 28	28	32	25	20	82	3.89	+ 0.3	7	12,736	w.	56	w.	26	18	16	6.5	17.5	
Block Island	27	39	48	30.07	30.10	+ .01	30.4	+ 0.8	33.4	+ 1.9	33.4	+ 2.6	30.8	+ 0.1	33.4	+ 0.1	33.4	+ 0.5	53	+ 28	28	32	25	20	82	3.89	+ 0.3	7	12,736	w.	56	w.	26	18	16	6.5	17.5	
Narragansett Pier	10	10	10	30.08	30.12	+ .01	30.8	+ 1.5	33.4	+ 1.9	33.4	+ 2.6	30.8	+ 0.1	33.4	+ 0.1	33.4	+ 0.5	53	+ 28	28	32	25	20	82	3.89	+ 0.3	7	12,736	w.	56	w.	26	18	16	6.5	17.5	
New Haven	107	118	140	29.97	30.09	- .03	27.9	+ 0.9	31.6	+ 1.8	31.6	+ 2.6	30.8	+ 0.1	31.6	+ 0.9	31.6	+ 1.8	51	+ 23	23	33	22	20	82	4.15	+ 1.2	7	12,736	w.	56	w.	26	18	16	6.5	17.5	
Mid. Atlan. States.																																						
Albany	97	84	118	30.00	30.11	+ .01	24.7	+ 0.5	28.8	+ 1.5	28.8	+ 2.6	24.7	+ 0.5	28.8	+ 1.5	28.8	+ 2.6	53	+ 28	28	32	25	20	82	2.00	+ 1.7	11	8,017	w.	41	w.	18	10	12	5.7	23.5	
Binghamton	876	79	90	29.75	30.12	+ .00	29.4	+ 1.5	31.4	+ 2.6	31.4	+ 2.6	29.4	+ 1.5	31.4	+ 2.6	31.4	+ 2.6	53	+ 28	28	32	25	20	82	1.88	+ 1.5	11	8,017	w.	41	w.	18	10	12	5.7	23.5	
New York	314	298	326	29.75	30.12	+ .00	29.4	+ 1.5	31.4	+ 2.6	31.4	+ 2.6	29.4	+ 1.5	31.4	+ 2.6	31.4	+ 2.6	53	+ 28	28	32	25	20	82	1.88	+ 1.5	11	8,017	w.	41	w.	18	10	12	5.7	23.5	
Harrisburg	377	94	102	29.74	30.18	+ .06	27.7	+ 2.6	31.4	+ 2.6	31.4	+ 2.6	27.7	+ 2.6	31.4	+ 2.6	31.4	+ 2.6	53	+ 28	28	32	25	20	82	1.60	+ 2.0	10	7,774	w.	40	w.	18	10	12	5.6	23.8	
Philadelphia	117	168	184	30.05	30.15	+ .01	30.8	+ 1.8	31.4	+ 2.6	31.4	+ 2.6	30.8	+ 1.8	31.4	+ 2.6	31.4	+ 2.6	53	+ 28	28	32	25	20	82	2.17	+ 1.2	11	8,422	w.	36	w.	18	10	12	5.6	23.8	
Atlantic City	53	68	76	30.09	30.14	+ .01	30.8	+ 1.5	31.4	+ 2.6	31.4	+ 2.6	30.8	+ 1.5	31.4	+ 2.6	31.4	+ 2.6	53	+ 28	28	32	25	20	82	2.50	+ 1.3	11	9,611	w.	34	w.	18	10	12	5.2	23.4	
Baltimore	123	68	69	30.03	30.17	+ .01	31.6	+ 2.7	31.6	+ 2.6	31.6	+ 2.6	31.6	+ 2.7	31.6	+ 2.6	31.6	+ 2.6	53	+ 28	28	32	25	20	82	2.05	+ 1.3	11	4,558	w.	28	w.	18	10	12	5.0	23.4	
Washington	112	59	73	30.07	30.30	+ .03	37.8	+ 1.9	37.8	+ 2.6	37.8	+ 2.6	37.8	+ 1.9	37.8	+ 2.6	37.8	+ 2.6	53	+ 28	28	32	25	20	82	1.93	+ 1.5	11	6,316	n.w.	40	n.w.	18	10	12	5.0	23.4	
Cape Henry	5	34	34	29.94	30.23	+ .05	38.6	+ 3.3	38.6	+ 2.6	38.6	+ 2.6	38.6	+ 3.3	38.6	+ 2.6	38.6	+ 2.6	53	+ 28	28	32	25	20	82	2.19	+ 1.3	11	3,937	n.w.	26	n.w.	18	10	12	5.0	23.4	
Lynchburg	685	83	88	29.44	30.23	+ .05	38.6	+ 3.3	38.6	+ 2.6	38.6	+ 2.6	38.6	+ 3.3	38.6	+ 2.6	38.6	+ 2.6	53	+ 28	28	32	25	20	82	2.19	+ 1.3	11	10	12	5.0	23.4						
Norfolk	57	88	90	30.13	30.23	+ .04	38.3	+ 3.3	38.3	+ 2.6	38.3	+ 2.6	38.3	+ 3.3	38.3	+ 2.6	38.3	+ 2.6	53	+ 28	28	32	25	20	82	1.47	+ 2.4	10	6,269	n.	18	14	12	5.2	1.5			
S. Atlantic States.																																						
Charlotte	773	67	76	29.84	30.20	+ .03	37.1	+ 4.1	62	+ 3.5	62	+ 4.1	62	+ 3.5	62	+ 3.5	62	+ 3.5	53	+ 28	28	32	25	20	82	2.53	+ 2.6	10	4,030	e.	26	sw.	18	14	12	5.2	1.1	
Hatteras	11	17	34	30.17	30.18	+ .03	45.0	+ 3.6	64	+ 4.1	64	+ 4.1	64	+ 3.6	64	+ 3.6	64	+ 3.6	53	+ 28	28	32	25	20	82	2.00	+ 3.9	9	11,428	n.	44	s.	18	14	12	5.1	0.0	
Kittyhawk	9	12	30	30.18	30.19	+ .03	40.2	+ 2.0	60	+ 3.6	60	+ 3.6	60	+ 2.0	60	+ 2.0	60	+ 2.0	53	+ 28	28	32	25	20	82	1.35	+ 3.8	7	11,243	n.	43	s.	18	14	12	5.2	1.8	
Raleigh	375	93	101	29.80	30.21	+ .03	37.9	+ 3.6	65	+ 4.1	65	+ 4.1	65	+ 3.6	65	+ 3.6	65	+ 3.6	53	+ 28	28	32	25	20	82	2.28	+ 1.3	10	4,932	n.	34	w.	18	14	12	5.2	1.8	
Wilmington	78	83	88	30.19	30.21	+ .04	43.6	+ 3.7	65	+ 4.1	65	+ 4.1	65	+ 3.7	65	+ 3.7	65	+ 3.7	53	+ 28	28	32	25	20	82	2.37	+ 1.3	10	4,932	n.	34	w.	18	14	12	5.2	1.8	
Charleston	52	60	70	30.17	30.23	+ .04	47.4	+ 2.5	71	+ 5.4	71	+ 5.4	71	+ 2.5	71	+ 2.5	71	+ 2.5	53	+ 28	28	32	25	20	82	1.42	+ 1.1	7	4,920	n.	36	w.	18	14	12	5.2	1.8	
Columbia	5	14	14	29.82	30.23	+ .04	47.5	+ 2.6	73	+ 5.4	73	+ 5.4	73	+ 2.6	73	+ 2.6	73	+ 2.6	53	+ 28	28	32	25	20	82	1.42	+ 1.1	7	4,920	n.	36	w.	18	14	12	5.2	1.8	
Augusta	180	89	108	30.21	30.21	+ .04	44.0	+ 3.4	73	+ 5.4	73	+ 5.4	73	+ 3.4	73	+ 3.4	73	+ 3.4	53	+ 28	28	32	25	20	82	1.39	+ 1.4	7	5,386	w.	27	w.	18	14	12	5.2	1.8	
Savannah	96	68	88	30.11	30.23	+ .03	48.2	+ 3.4	71	+ 5.4	71	+ 5.4	71	+ 3.4	71	+ 3.4	71	+ 3.4	53	+ 28	28	32	25	20	82	1.39	+ 1.4	7	5,386	w.	27	w.	18	14	12	5.2	1.8	
Jacksonville	43	89	94	30.15	30.20	+ .03	52.1	+ 3.2	73	+ 5.4																												

TABLE I.—Climatological data for Weather Bureau Stations, January, 1897—Continued.

Stations.	Elevation of instruments		Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.						Precipitation, in inches.		Wind.				
	Barometer above sea level, feet.	Thermometers above ground.	Mean actual, 8 a.m. and 8 p.m. +	Mean reduced.	Departure from normal.	Mean max. and min. + %.	Departure from normal.	Maximum.	Date.	Mean maximum.	Date.	Mean minimum.	Greatest daily range.	Total.	Departure from normal.	Miles per hour.	Maximum velocity.
	Anemometer above ground.		Mean actual, 8 a.m. and 8 p.m. +	Mean reduced.	Departure from normal.	Mean max. and min. + %.	Departure from normal.	Maximum.	Date.	Mean maximum.	Date.	Mean minimum.		Days more than Jl. or more.	Total movement, miles.	Precipitation, direction.	Direction.
<i>Up. Miss. Val.—Con.</i>																	
Springfield, Ill....	644	82	92	29.44	30.17	.00	25.2	—0.4	61	9	31	19	36	5.91	+3.8	12	8,306
Hannibal.....	534	75	107	29.57	30.17	—	30.2	+0.4	57	1	34	18	28	6.36	+4.9	15	8,022
St. Louis.....	587	110	210	29.55	30.20	+0.04	30.2	+1.9	61	2	37	20	28	8.75	+1.6	13	9,324
<i>Missouri Valley.</i>																	
Columbia.....	....	4	84	29.18	30.32	+0.08	28.8	+1.6	64	1	35	20	28	6.87	+1.5	11	7,859
Kansas City.....	968	78	95	29.18	30.32	+0.08	27.4	+1.6	65	1	37	21	28	2.66	+1.5	11	7,046
Springfield, Mo....	1,324	100	108	28.72	30.19	+0.08	30.4	+0.5	61	1	37	24	30	6.47	+4.1	18	8,822
Topeka.....	....	81	—	28.4	30.19	—	22.6	+4.9	51	6	38	10	24	1.45	+0.8	10	... .
Lincoln.....	1,103	92	97	28.94	30.19	—	14.2	+2.5	45	21	23	18	33	0.65	+0.1	7	8,864
Omaha.....	1,165	93	109	28.94	30.20	+0.08	20.9	+3.7	51	8	39	15	33	0.87	+0.2	10	9,620
Pierre.....	1,460	50	61	28.55	30.22	+0.08	14.6	+6.6	41	21	16	6	5	1.41	+0.6	10	4,14
Huron.....	1,310	68	73	28.71	30.24	+0.08	19.2	+3.9	51	7	33	12	18	1.66	+1.2	11	7,108
<i>Northern Slope.</i>																	
Havre.....	2,494	15	33	27.41	30.21	+0.06	18.4	+8.1	53	7	22	38	24	1.1	+0.4	5	6,725
Miles City.....	2,372	41	49	27.55	30.21	+0.08	14.9	+4.8	54	21	24	28	32	0.58	+0.1	8	4,288
Helena.....	4,108	88	98	25.90	30.31	+0.08	20.8	+5.5	49	*	24	28	31	0.89	+0.6	8	3,609
Rapid City.....	3,280	53	61	26.63	30.20	+0.08	21.0	+1.8	64	8	33	20	25	0.63	+0.3	7	6,216
Cheyenne.....	6,105	58	60	23.36	30.23	+0.10	25.8	+0.0	55	21	27	12	18	0.27	+0.1	6	8,720
Lander.....	5,372	26	35	24.66	30.35	+0.18	15.0	+0.3	55	21	27	2	45	0.28	+0.6	5	2,085
North Platte.....	9,886	43	52	27.14	30.24	+0.03	25.2	+7.3	58	8	35	15	43	0.47	0.0	4	7,830
<i>Middle Slope.</i>																	
Denver.....	5,290	83	151	24.72	30.26	+0.09	26.6	+0.1	59	22	39	14	27	15	4.97	+0.1	4,204
Pueblo.....	4,712	74	81	25.26	30.23	+0.09	26.4	+1.9	55	6	36	16	24	6.53	+0.2	5	45
Concordia.....	1,308	49	47	28.63	30.21	+0.01	28.0	+6.6	55	6	36	24	28	6.55	+0.2	9	5,956
Dodge City.....	2,504	44	52	27.48	30.23	+0.05	28.2	+4.6	55	6	35	20	25	1.44	+1.0	6	8,030
Wichita.....	1,351	78	85	26.71	30.21	+0.05	30.8	+2.8	58	16	34	19	25	1.23	+0.2	8	7,202
Oklahoma.....	1,218	64	58	28.88	30.24	+0.03	34.8	+3.7	63	1	44	8	27	26	35	9	6,125
<i>Southern Slope.</i>																	
Abilene.....	1,749	47	54	28.35	30.26	+0.06	40.0	+0.5	71	10	49	5	27	31	36	4	5,204
Amarillo.....	8,091	58	61	26.31	30.25	+0.07	27.6	+5.9	55	23	35	1	1	6.53	+0.0	5	4,481
<i>Southern Plateau.</i>																	
El Paso.....	3,767	10	110	26.28	30.16	+0.03	27.4	+0.4	48	21	32	17	20	2.24	+1.5	10	6,026
Santa Fe.....	6,996	47	50	28.21	30.18	+0.01	51.2	+2.2	71	*	24	35	34	0.54	+0.5	9	4,473
Phoenix.....	1,076	47	57	28.88	30.08	—	30.8	+1.8	61	23	35	37	44	1.11	+0.5	9	2,651
Yuma.....	139	16	50	29.90	30.06	+0.03	51.6	+3.0	61	23	35	46	51	3.67	+1.0	8	4,978
<i>Middle Plateau.</i>																	
Carson City.....	4,720	47	...	25.28	30.18	—	33.4	+2.4	55	22	44	10	2	2.38	+1.0	10	10
Winnemucca.....	4,340	59	70	25.70	30.20	+0.00	32.6	+5.6	53	22	48	10	2	2.26	+0.4	8	2,481
Salt Lake City.....	4,344	83	90	25.72	30.29	+0.04	26.5	+1.1	48	22	38	9	27	1.20	+0.3	11	2,662
<i>Northern Plateau.</i>																	
Baker City.....	8,470	49	47	26.52	30.24	+0.00	27.0	+4.7	45	21	33	—4	26	2.74	+1.5	10	8,745
Idaho Falls.....	4,742	10	56	25.80	30.34	+0.10	18.6	+3.1	41	21	32	17	23	0.67	+1.7	11	4,960
Spokane.....	1,943	99	107	28.09	30.23	+0.11	28.9	+7.9	49	6	34	26	21	1.50	+1.0	14	3,267
Walla Walla.....	1,018	65	73	29.10	30.24	+0.08	30.8	+1.0	61	23	35	26	20	1.95	+0.6	12	2,440
<i>N. Pac. Coast Reg.</i>																	
Fort Canby.....	179	10	34	29.89	30.02	+0.00	42.5	+1.6	56	8	46	26	30	1.10	+0.6	12	12,840
Port Angeles.....	29	47	61	—	—	—	39.1	+4.4	56	20	44	19	26	0.79	+0.3	11	5,795
Pysht.....	....	5	—	—	—	—	39.5	—	53	4	44	22	26	0.31	+2.5	19	... .
Seattle.....	119	100	108	29.95	30.05	—	40.0	—	56	6	44	22	26	0.31	—	21	3,473
Tatoosh Island.....	86	12	21	29.93	30.03	+0.01	41.9	+1.7	52	*	45	30	26	0.67	+1.7	11	4,960
Astoria.....	39	60	—	—	—	—	44.2	+1.8	54	6	45	25	26	0.67	+1.7	21	5,267
Portland, Oreg.....	153	203	213	29.93	30.10	+0.01	38.8	+1.0	57	20	48	22	26	0.94	+2.0	21	8,733
Roseburg.....	521	56	67	29.49	30.07	+0.06	41.8	+1.5	62	20	47	31	37	0.25	+4.5	14	1,730
<i>Md. Pac. C't Reg.</i>																	
Eureka.....	64	60	69	30.03	30.08	+0.02	48.1	+2.1	62	28	54	34	15	4.04	+1.1	18	3,465
Redbluff.....	334	54	58	29.75	30.12	+0.02	45.8	+0.5	55	29	50	33	11	3.81	+2.5	19	3,387
Sacramento.....	71	106	117	—	—	—	44.2	+1.5	59	22	46	39	4	3.66	+0.2	20	5,076
San Francisco.....	163	161	167	29.94	30.10	+0.08	48.6	+1.4	60	23	53	40	11	4.44	+0.4	22	5,086
Point Reyes Light.....	12	—	—	—	—	—	49.4	+1.2	63	8	54	39	13	2.74	+3.8	8	... .
<i>S. Pac. Coast Reg.</i>																	
Fresno.....	389	67	70	29.75	30.11	+0.04	43.7	+0.6	61	29	49	30	8	3.93	+0.8	13	3,465
Los Angeles.....	330	74	76	29.70	30.06	+0.08	55.6	+2.3	79	22	65	37	2	3.80	+0.8	8	3,423
San Diego.....	69	59	70	29.97	30.05	+0.06	55.8	+2.1	73	22	63	40	2	3.70	+0.8	13	5,086
San Luis Obispo.....	201	10	46	29.37	30.09	—	51.8	—	74	21	64	30	3	3.13	+0.8	9	3,112

Note.—The data at stations having no departures are not used in computing the district averages. Letters of the alphabet denote number of days missing from the record. *Two or more directions, dates, or years. †Received too late to be considered in departures, etc.

TABLE II.—*Meteorological record of voluntary and other cooperating observers, January, 1896.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>Alabama.</i>	0	0	0	In.	In.	<i>Arizona—Cont'd.</i>	0	0	0	In.	1.47	<i>California—Cont'd.</i>	0	0	0	In.	In.
Alco ^t	78	15	48.0	2.42		Wilcox ^{*8}	60	26	40.4	In.	1.47	Fort Bragg ^t	0	0	0	2.66	
Ashville ^{*1}	70	4	40.3	4.15	1.8	Arkansas.	71	10	41.0	5.85	0.2	Port Ross	.....	.....	.....	4.74	
Bermuda ^t	74	13	47.1	3.40		Amity	65	6	38.6	6.45	0.5	Port Tejon	.....	.....	.....	5.52	14.0
Brenton ^t	78	12	45.2	2.45		Arkansas City ^t	71	8	42.8	7.22	3.0	Georgetown ^t	64	24	42.9	4.88	2.0
Bridgeport ^t	72	18	46.4	3.33		Beebranch ^t	65	12	39.8	8.91		Glendora	.....	.....	.....	5.41	
Citronelle ^t	72	18	46.4	3.33		Blackton	71	9	39.8	7.83	1.0	Goshen ^{*8}	62	30	44.2	2.64	
Cianton ^t	69	12	44.4	3.58	1.0	Blanchard Springs ^t	67	12	38.6	6.70	0.5	Grand Island ^{*5}	59	36	46.0	4.14	
Cordova ^t	72	13	45.8	5.23		Brinkley ^t	73	9	39.8	7.76	2.5	Grass Valley	.....	.....	.....	5.30	T.
Daphnet ^t	78	14	46.8	2.16	T.	Camden ^{a+}	64	4	35.3	4.27	1.0	Greenville ^t	57	8	34.8	2.57	9.5
Decatur ^t	69	8	38.0	3.85	1.5	Camden ^{b+}	73	10	43.6	6.25		Guinda	.....	.....	.....	4.35	
Eiba ^t	76	14	47.4	2.10		Conway	65	4	32.8	5.25	0.5	Healdsburg ^t	68	32	42.4	5.07	
Eufaula ^t	73	18	46.8	1.60		Dallas	71	5	39.6	4.27	1.7	Hollister	66	24	46.4	1.06	
Eufaula ^c	73	18	46.8	1.61		Dardanelle	.....	.....	.....	4.40		Hueneme	65	26	46.8	2.96	
Evergreen ^t	73	18	44.0	1.77		Eion ^t	75	1	44.0	7.09	3.5	Hydesville	77	25	53.1	1.10	
Florence ^a	68	5	38.7	4.05	1.0	Fayetteville ^t	68	0	35.4	5.20	3.2	Iowa Hill ^{*1}	67	27	43.1	3.44	
Fort Deposit ^t	78	13	48.8	1.87	1.5	Forrest	68	12	39.0	9.14	T.	Jolon	.....	.....	.....	4.61	
Gadsden	67	3	39.7	5.14	2.0	Fulton	.....	.....	.....	7.14	1.0	Keeeler [*]	65	34	44.8	0.10	
Goodwater ^t	71	9	42.8	3.20	0.5	Helena ^a	.....	.....	.....	6.08		Keene [*]	65	26	44.5	2.98	
Greensboro ^t	72	12	41.6	5.74		Hot Springs ^b	.....	.....	.....	7.25		Kennedy Gold Mine	62	29	41.1	6.00	
Hamilton	.....	.....	.....	5.51	0.7	Hot Springs (near)	.....	.....	.....	7.94		Kernville	.....	.....	.....	3.40	
Healing Springs ^t	88	10	45.8	4.46		Jonesboro	65	6	37.2	7.51		King City ^{*2}	74	39	52.1	2.07	
Highland Home ^t	73	14	45.8	T.	Keesees Ferry ^t	68	1	38.8	5.72	1.1	Kingsburg ^{*6}	55	30	44.4	1.64		
Livingston	72	14	48.6	4.71		Lacrosse ^t	62	0	33.6	5.02		Kono Tayee	56	34	48.4	2.85	
Lock No. 4	70	8	39.9	4.69	1.0	Lonoke ^{*1}	70	14	40.2	9.44	T.	Lagrange ^{*8}	60	33	45.3	2.20	
Madison Station ^t	67	-5	36.8	4.04	1.0	Luna Landing ^{*6}	71	6	42.9	5.90		Laporte ^{*1}	55	14	38.6	6.04	45.0
Marion ^t	71	12	42.5	4.18		Lutherville ^t	73	6	38.6	7.26		Las Fuentes Ranch	.....	.....	.....	2.68	
Mount Willing ^t	72	11	38.3		Malvern ^t	67	17	41.6	5.99		Lemoore ^a	59	39	44.6	0.88		
Newbern ^t	72	12	45.6	5.71	1.5	Marrianna ^{*1}	70	13	41.1	6.68		Lick Observatory	59	26	41.6	3.50	2.0
Newburg	68	-5	38.4	3.69	1.0	Moarrell	70	13	41.1	14.72	1.0	Lime Kiln	64	30	46.3		
Newton ^t	77	13	47.1	2.25		Moore	.....	.....	.....	7.17		Lodi	55	31	44.6	3.41	
Opalka ^t	72	10	44.0	1.25		Mossville	63	2	38.3	8.56		Los Alamos ^t	58	34	45.7	3.07	
Oxanna ^t	68	7	38.7	3.67	1.4	Mount Nebo ^t	66	0	32.1	4.04		Los Gatos ^b	58	32	47.3	4.65	
Pineapple ^t	.....	.....	.....	1.23	1.5	New Gascony ^{*1}	70	16	40.4	9.36	1.0	Lyon Springs	58	30	42.8		
Pushmataha ^t	72	15	43.8	5.49	1.0	Newport ^a	68	8	36.6	7.17		McMullin ^{*1}	58	27	43.0	5.06	0.5
Rockmills ^t	75	6	45.0	8.39		Newport ^b	68	9	38.6	6.47		Mammoth Tank ^{*8}	74	38	55.2	2.70	12.0
Scotteboro ^t	69	-4	37.8	4.71	2.5	Oregon ^{*1}	62	0	31.2	.....	1.5	Manzana	54	21	37.5	2.70	
Selma ^t	74	15	44.2	3.27	1.3	Oseola ^t	67	8	38.6	6.88		Middletown ^{*1}	55	28	41.7	4.21	
Talladega ^{*1}	70	10	41.1	3.24	0.5	Ozark ^t	70	11	41.1	8.57		Mills College	58	22	47.7	3.32	
Tallassee ^t	.....	.....	.....	3.28	1.0	Picayune ^t	70	14	41.8	13.88	0.4	Milton (near) ^{*1}	70	31	47.8	1.19	
Thomaville ^t	74	11	40.9	4.48		Pinebluff	65	14	38.3	8.38		Modesto ^{*8}	64	30	48.8	1.68	0.5
Union ^t	73	10	44.0	5.18		Pocahontas ^t	65	12	34.1	6.79		Mohave ^{*8}	64	32	43.2	5.92	
Union Springs ^t	73	10	42.8	4.83	1.0	Prescott ^t	75	13	43.4	5.89		Mokelumne Hill ^{*8}	58	32	43.8	1.00	
Uniontown ^t	72	13	44.9	5.49	1.5	Rison ^t	71	14	40.8	5.89	1.0	Morenia Dam ^{*8}	67	35	40.6	4.44	T.
Valleyhead	64	-7	37.8	5.29	2.0	Russellville ^t	68	6	37.8	8.26	3.8	Mount Breckenridge	.....	.....	.....	2.00	7.0
Warrior ^t	.....	.....	.....	3.65		Silver Springs ^t	67	2	32.5	6.16	3.2	Mount Frazier	.....	.....	.....	7.37	87.0
Wetumpka ^t	73	12	44.0	2.92	T.	Stuttgart ^t	69	14	40.3	9.25	T.	Mount Glenwood ^{*1}	58	31	44.4	6.59	
Wilsonville ^t	.....	.....	.....	3.81	1.0	Texarkana ^t	76	10	42.4	5.98		Mt. Flat ^t	.....	.....	.....	9.10	41.0
<i>Arizona.</i>	.....	.....	.....	.....		Warren ^t	73	14	43.4	8.00	1.0	Napa ^b	61	31	46.3	2.29	
Benson ^{*8}	71	30	46.4	2.10		Washington ^{*1}	70	13	42.8	7.66	0.2	Needles	75	37	55.0	2.34	
Bisbee ^t	60	22	41.9	2.50		Wiggs [*]	69	10	41.5	7.07	0.9	Nevada City ^t	64	24	41.2	4.38	
Buckeye ^t	78	28	54.6	2.30		Winslow	.....	.....	.....	4.18	4.5	Newcastle ^t	58	30	41.5	4.08	
Buttes	.....	.....	.....	4.40		Witts Springs ^t	63	0	34.6	4.77	1.0	Newhall ^{*8}	73	27	45.3	4.56	
Calabasas	67	19	41.2	2.39		<i>California.</i>	.....	.....	.....	.....		Nordhoff ^t	58	26	49.4	4.11	
Congress	67	33	47.8	6.66	T.	Adin	55	4	31.3	1.24	4.0	North Ontario	70	35	50.5	5.26	
Dragoon ^t	.....	.....	.....	2.11		Agnew	62	30	47.4	1.65		North San Juan ^{*1}	72	25	47.2	4.20	
Dragoon Summit ^t	58	29	43.2	2.24		Arlington Heights	75	35	52.6	2.75		Oakland [*]	65	30	48.8	3.58	
Dudleyville	67	19	46.6	1.96		Athlone ^{*8}	59	25	43.0	2.16		Oroville ^b	62	40	48.6	4.20	
Eagle Pass ^{*8}	70	12	31.8	2.95	5.5	Azusa	.....	.....	.....	.....		Otay Dam ^{*1}	78	26	50.8	3.21	
Farleys Camp ^t	70	28	50.2	5.95		Bear Valley ^t	58	25	41.3	2.15	0.5	Palermo ^t	60	39	44.8	3.35	
Fort Apache	58	5	34.8	2.22	5.0	Berkeley	57	38	46.1	3.71		Paso Robles ^b	64	26	40.0	3.65	
Fort Grant ^t	64	22	42.8	4.09		Bishop ^t	67	16	38.8	0.32	T.	Peachland ^{*1}	60	26	40.3	5.60	
Fort Huachuca ^t	69	25	49.2	3.68	15.0	Bishop Creek ^{*8}	65	20	39.1	0.08		Pilot Creek	.....	.....	.....	5.68	8.5
Fort Mohave	73	25	51.8	2.93		Boga ^t	63	0	27.8	2.20	22.0	Placerville	58	23	40.4	4.68	
Gilabed ^a ^{*8}	76	25	54.6	2.62		Bowmans Dam ^t	63	20	48.8	4.88	41.0	Point Lobos	57	40	47.6	2.91	
Glendale	70	26	49.1	3.58		Caliente ^{*8}	69	35	49.9	1.25		Pomona (near)	76	31	52.3	5.54	
Holbrook ^t	58	5	31.9	1.63	7.0	Castie Pinckney ^{*1}	72	42	53.7	8.88		Poway ^{*8}	76	29	46.6	4.30	
Ingleside	71	28	48.0	3.35		Cedarville	58	15	38.6	0.31		Quincy [*]	69	33	47.7	3.59	
Lochiel [*]	68	20	42.0	2.37		Centerville ^t	64	35	50.5	2.08		Ravena [*]	69	33	47.7	3.77	8.5
Marcopica ^{*8}	80	26	55.8	2.53		Chico ^t	62	26	47.3	3.88		Redding ^b	67	39	45.6	4.42	</td

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	
<i>California—Cont'd.</i>																		
Santa Paula \dagger .	°	°	50.0	5.31	In.	Santa Rosa * .	73	33	48.0	8.37		Saticoy.	.....	.....	.....	.....	.....
Shasta.	73	39	53.2	4.48		Sierra Madre.	73	39	53.2	8.80	42.0	Sneddens Ranch \dagger.	.....	.....	.....	.....	.....
S. E. Farallone L. H.	62	33	45.8	1.84		T. S. Ranch \dagger .	73	39	53.2	8.04		Stockton α .	56	31	43.9	1.81		
Stanford University.	56	31	45.9	1.81		Twin Lakes.	44	—21	13.9	0.79	9.5	Summerdale.	58	15	35.3	4.49	24.0	
Susanville.	55	14	35.0	5.93	11.0	Vilas.	44	—21	13.9	0.20	8.0	Tulear δ .	50	—8	25.9	2.68	28.5	
Sutter Creek *5 .	56	24	38.4	2.36		Walden.	59	—19	28.2	0.17	6.7	Truckee *5 .	57	34	46.4	2.58		
Tecate Dam *4 .	71	22	42.2	4.95		Wray \ddagger .	64	—14	26.8	0.28	3.5	Templeton *5 .	65	30	46.4	2.68		
Tehipa *8 .	57	34	46.4	2.58		Yuma.	.....	.....	0.37	3.8		Ukiah \dagger .	57	28	42.3	1.93	
Templeton *5 .	65	30	46.4	2.68		Connecticut.	Bridgeport.	53	—6	28.4	3.93	18.4	Upper Mattole *1 .	78	32	49.9	6.88	
Tulare δ .	74	26	46.8	2.40		Canton \dagger .	52	—6	25.2	3.44	20.0	Vacaville α^* .	60	32	45.2	6.36		
Turlock δ .	57	28	42.3	1.93		Colchester.	54	—3	26.6	5.85	26.5	Ventura \dagger .	79	33	52.0	4.07		
Ukiah \dagger .	60	27	45.0	4.26		Falls Village.	.....	.....	3.25	20.5		Volcano Springs *2 .	83	33	59.8	0.00	
Upper Mattole *1 .	78	32	49.9	6.88		Greenfield Hill.	.....	.....	4.40	18.9		Walnut creek.	60	32	44.8	8.45	
Vacaville α^* .	60	32	45.2	6.36		Hartford δ.	.....	.....	4.08	27.0		West Palmdale.	.....	.....	3.78	30.0	
Ventura \dagger .	79	33	52.0	4.07		Hartford δ .	51	—3	27.2	.....	27.5	Westpoint \dagger.	.....	.....	5.41	11.6	
Volcano Springs *2 .	83	33	59.8	0.00		Hartford δ .	51	—1	27.2	3.90	14.0	Wheatland \dagger .	59	30	43.2	8.18		
Walnut creek.	60	32	44.8	8.45		Hartford δ .	51	—1	26.2	4.68	22.5	Williams *3 .	63	33	45.9	8.90		
West Palmdale.	.....	.....	3.78	30.0		Hartford δ .	51	—1	26.2	4.88	27.0	Wilkinson \dagger .	78	37	60.0	2.20	
Westpoint \dagger.	.....	.....	5.41	11.6		Hartford δ .	51	—1	26.2	3.84	28.0	Wire Bridge *5 .	63	28	45.1	2.20	
Wheatland \dagger .	59	30	43.2	8.18		Hartford δ .	51	—1	26.2	3.55	28.0	Yreka \dagger .	54	18	35.6	0.48	T.	
Williams *3 .	63	33	45.9	8.90		Hartford δ .	51	—1	27.2	4.08	27.0	Yuba City *5 .	58	37	48.6	4.94		
Wilkinson \dagger .	78	37	60.0	2.20		Hartford δ .	51	—1	26.2	4.68	22.5	Engineers Quarters \dagger.	.....	.....	5.16	30.5	
Wire Bridge *5 .	63	28	45.1	2.20		Hartford δ .	51	—1	26.2	4.88	27.0	Morse House \dagger.	.....	.....	9.84	37.0	
Yreka \dagger .	54	18	35.6	0.48	T.	Hartford δ .	51	—1	26.2	5.00	28.0	Deep Creek \dagger.	.....	.....	5.43	34.0	
Yuba City *5 .	58	37	48.6	4.94		Hartford δ .	51	—1	26.2	5.42	30.5	Holcomb Creek \dagger.	.....	.....	8.35	23.0	
Engineers Quarters \dagger.	.....	.....	5.16	30.5		Hartford δ .	51	—1	26.2	5.47	32.0	Squirrel Inn \dagger.	.....	.....	7.65	32.0	
Alma \dagger .	41	—9	15.4	0.81	2.5	Hartford δ .	51	—1	26.2	5.81	32.0	Colorado.	.....	.....	.....	.....	.....
Antlers \dagger .	43	—2	28.6	1.13	11.6	Hartford δ .	51	—1	26.2	6.18	32.0	Alma \dagger .	41	—9	15.4	0.81	2.5	
Arkins.	.....	.....	0.18	2.2		Hartford δ .	51	—1	26.2	6.48	32.0	Antlers \dagger .	43	—2	28.6	1.13	11.6
Boxelder.	.....	.....	0.18	2.2		Hartford δ .	51	—1	26.2	6.84	32.0	Arkins.	.....	.....	0.18	2.2	
Breckenridge \dagger .	53	—26	18.4	2.90	29.0	Hartford δ .	51	—1	26.2	7.11	32.0	Boxelder.	.....	.....	0.18	2.2	
Canyon \dagger .	59	—15	30.1	0.05	2.0	Hartford δ .	51	—1	26.2	7.47	32.0	Breckenridge \dagger .	53	—26	18.4	2.90	29.0	
Castlerock \dagger .	47	—21	22.0	0.47	4.7	Hartford δ .	51	—1	26.2	7.77	32.0	Canyon \dagger .	59	—26	30.1	0.05	2.0	
Collbran.	.....	.....	1.60	16.0		Hartford δ .	51	—1	26.2	8.03	32.0	Castlerock \dagger .	47	—21	22.0	0.47	4.7
Colorado Springs \dagger .	58	—18	25.4	0.10	1.8	Hartford δ .	51	—1	26.2	8.32	32.0	Collbran.	.....	.....	1.60	16.0	
Cope \dagger .	60	—13	26.6	0.38	4.0	Hartford δ .	51	—1	26.2	8.57	32.0	Colorado Springs \dagger .	58	—18	25.4	0.10	1.8	
Cripple Creek \dagger .	57	—10	24.8	0.61	6.3	Hartford δ .	51	—1	26.2	8.87	32.0	Cope \dagger .	60	—13	26.6	0.38	4.0	
Delta.	45	—6	22.9	0.49	8.5	Hartford δ .	51	—1	26.2	9.17	32.0	Cripple Creek \dagger .	57	—10	24.8	0.61	6.3	
Downing \dagger .	57	—9	23.6	1.10	11.0	Hartford δ .	51	—1	26.2	9.47	32.0	Delta.	45	—6	22.9	0.49	8.5	
Dumont \dagger .	50	—10	24.6	0.48	4.5	Hartford δ .	51	—1	26.2	9.77	32.0	Downing \dagger .	57	—9	23.6	1.10	11.0	
Fleming.	.....	.....	0.61	6.5		Hartford δ .	51	—1	26.2	10.07	32.0	Dumont \dagger .	50	—10	24.6	0.48	4.5
Fort Collins \dagger .	64	—26	24.8	0.18	2.2	Hartford δ .	51	—1	26.2	10.37	32.0	Fleming.	.....	.....	0.61	6.5	
Fox.	.....	.....	0.30	3.0		Hartford δ .	51	—1	26.2	10.67	32.0	Fort Collins \dagger .	64	—26	24.8	0.18	2.2
Garnett.	.....	.....	0.26	3.0		Hartford δ .	51	—1	26.2	10.97	32.0	Fox.	.....	.....	0.30	3.0	
Gleneyrie \dagger .	56	—14	26.4	0.39	6.0	Hartford δ .	51	—1	26.2	11.27	32.0	Garnett.	.....	.....	0.26	3.0	
Grand Junction \dagger .	47	—9	29.8	1.00	5.5	Hartford δ .	51	—1	26.2	11.57	32.0	Gleneyrie \dagger .	56	—14	26.4	0.39	6.0	
Greeley \dagger .	60	—22	23.0	0.06	5.5	Hartford δ .	51	—1	26.2	11.87	32.0	Grand Junction \dagger .	47	—9	29.8	1.00	5.5	
Gulch \dagger .	49	—5	23.0	0.71	12.0	Hartford δ .	51	—1	26.2	12.17	32.0	Greeley \dagger .	60	—22	23.0	0.06	5.5	
Gunnison \dagger .	43	—23	10.5	0.60	6.0	Hartford δ .	51	—1	26.2	12.47	32.0	Gulch \dagger .	49	—5	23.0	0.71	12.0	
Holly.	.....	.....	0.17	1.0		Hartford δ .	51	—1	26.2	12.77	32.0	Gunnison \dagger .	43	—23	10.5	0.60	6.0
Hugo (near).	60	—20	23.6	0.14	2.5	Hartford δ .	51	—1	26.2	13.07	32.0	Holly.	.....	.....	0.17	1.0	
Husted \dagger .	63	—24	26.8	0.43	6.8	Hartford δ .	51	—1	26.2	13.37	32.0	Hugo (near).	60	—20	23.6	0.14	2.5	
La Jara.	40	—25	9.4	0.40	4.0	Hartford δ .	51	—1	26.2	13.67	32.0	Husted \dagger .	63	—24	26.8	0.43	6.8	
Lake Moraine \dagger .	48	—31	19.2	1.22	15.0	Hartford δ .	51	—1	26.2	13.97	32.0	La Jara.	40	—25	9.4	0.40	4.0	
Lamar \dagger .	60	—18	29.0	0.06	1.5	Hartford δ .	51	—1	26.2	14.27	32.0	Lake Moraine \dagger .	48	—31	19.2	1.22	15.0	
Laporte.	.....	.....	0.20	2.0		Hartford δ .	51	—1	26.2	14.57	32.0	Lamar \dagger .	60	—18	29.0	0.06	1.5
Las Animas \dagger .	60	—20	28.4	0.45	3.5	Hartford δ .	51	—1	26.2	14.87	32.0	Laporte.	.....	.....	0.20	2.0	
Lay \dagger .	43	—33	15.9	0.77	7.2	Hartford δ .	51	—1	26.2	15.17	32.0	Las Animas \dagger .	60	—20	28.4	0.45	3.5	
Leadville (near) *1 .	45	—10	17.4	0.33	7.5	Hartford δ .	51	—1	26.2	15.47	32.0	Lay \dagger .	43	—33	15.9	0.77	7.2	
Lery \dagger .	55	—17	24.6	0.60	6.0	Hartford δ .	51	—1	26.2	15.77	32.0	Leadville (near) *1 .	45	—10	17.4	0.33	7.5	
Longmont \dagger .	51	—20	25.3	0.38	2.5	Hartford δ .	51	—1	26.2	16.07	32.0	Lery \dagger .	55	—17	24.6	0.60	6.0	
Longs Peak.	54	—14	.....	0.78	7.8	Hartford δ .	51	—1	26.2	16.37	32.0	Longmont \dagger .	51	—20	25.3	0.38	2.5
Loveland.	.....	.....	0.15	1.5		Hartford δ .	51	—1	26.2	16.67	32.0	Longs Peak.	54	—14	.....	0.78	7.8
Meeker \dagger .	46	—28	16.8	1.38	18.0	Hartford δ .	51	—1	26.2	16.97	32.0	Loveland.	.....	.....	0.15	1.5	
Millbrook \dagger .	59	—14	23.2</td															

TABLE II.—*Meteorological record of voluntary and other cooperating observers*—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>Illinois—Cont'd.</i>																	
Glenwood*†	55	-29	17.7	2.93	5.5	Rockville†	63	-15	24.9	4.10	11.0	Iowa—Cont'd.	50	-16	17.0	0.45	2.0
Glenwood†	67	-2	32.8	4.49	.....	Salem	65	-8	29.2	2.75	5.0	Neola	50	-20	17.6	2.39	15.0
Grafton	64	-7	27.7	4.97	13.3	Scottsburg	66	-6	29.2	2.39	4.5	Newton†	52	-20	10.2	1.50	10.0
Greenville†	64	-10	26.4	6.74	9.8	Seymour†	64	-8	26.2	2.80	11.0	Northwood	59	-20	18.6	1.18	7.8
Halliday*†	68	-1*	32.1*	3.31	2.0	Shelbyville	60	-10	21.5	3.29	.....	Ogden	59	-20	18.6	1.18	7.8
Havana†	63	-13	35.9	6.66	12.0	South Bend†	58	-23	21.5	5.53	21.5	Osage*†	55	-25	10.4	1.39	8.8
Herrin*†	66	-2	33.7	2.83	4.0	Summar	60	-18	25.2	8.00	11.0	Oskaloosa†	63	-18	20.1	1.19	10.0
Hillsboro†	63	-7	27.0	4.02	5.5	Syracuse†	63	-10	27.7	4.56	14.0	Ovid†	63	-15	19.8	1.71	10.0
Iron†	65	-3	30.6	4.05	1.0	Terre Haute†	63	-10	27.7	4.09	5.5	Plover	60	-16	20.9	0.15	6.0
Joliet†	61	-20	24.2	6.67	12.9	Tipton†	56	-18	22.9	3.91	9.7	Portsmouth	60	-20	12.8	1.55	9.0
Jordans Grove†	65	-3	31.3	3.16	3.2	Topeka†	53	-21	24.3	5.97	11.5	Pringhar	45	-24	18.2	1.05	10.5
Kankakee*†	64	-18	32.0	3.28	.....	Vaiparaiso†	63	-7	29.4	2.80	11.0	Rock Rapids	50	-20	18.2	1.05	10.5
Kishwaukee	59	-24	18.4	3.71	8.0	Vevey	65	-3	29.2	2.69	4.0	Sac City†	50	-21	11.6	1.92	10.8
Knoxville*†	65	-21	21.4	6.92	9.2	Vincennes†	65	-20	22.6	4.54	7.0	St. Charles	58	-17	18.4	1.26	11.8
Lagrange†	58	-20	21.5	6.09	10.2	Warsaw†	65	-4	30.9	3.21	.....	Scranton	45	-19	15.3	2.00	7.0
LaHarpe*†	64	-18	27.8	10.88	7.2	Washington†	63	-7	27.9	3.84	10.2	Seymour†	62	-15	21.8	1.95	5.0
Lanark*†	59	-23	18.4	2.48	.....	Worthington†	63	-10	27.7	2.08	7.8	Sibley	54	-13	21.0	0.85	7.0
Lexington	.....	-17	.....	6.67	9.0	<i>Indiana Territory.</i>						Sidney	54	-13	21.0	0.85	7.0
Loam†	59	-16	22.6	5.90	8.0	Headlton†	68	6	37.4	2.67	4.0	Sigourney	63	-19	18.5	2.16	9.5
Louisville†	65	-7	28.3	8.93	6.0	Leigh†	66	6	37.8	6.00	4.8	Spencer	45	-25	11.2	1.28	9.2
McLeansboro†	66	-4	31.0	4.23	1.0	Purcell	.....					Spirit Lake†	41	-27	10.6	1.09	10.9
Martinsville†	62	-8	26.8	4.15	9.0	South McAlester	66	4	34.8	4.12	13.0	Stuart	60	-18	18.2	1.10	6.0
Martinson†	59	-20	22.1	3.61	5.5	Tahequah	70	1	38.0	6.88	1.0	Toledo	59	-22	16.0	1.38	4.0
Mascoutah*†	64	-2	31.0	4.71	5.1	Tulsa†	68	1	35.1	3.26	3.0	Villisca†	57	-13	20.7	1.09	6.5
Mattoon*†	54	-5	27.6	4.05	8.2	Wagoner	.....					Vinton†	62	-20	17.0	1.74	8.0
Minook†	61	-16	22.6	5.14	9.5	<i>Iowa.</i>						Washington	.....	-20	8.51	7.8	.....
Mouthmouth†	63	-19	21.0	5.14	8.2	Headlton†	68	6	37.4	2.67	4.0	Waterloo	61	-23	16.0	1.78	7.4
Morrisonville†	62	-8	27.4	3.35	4.2	Afton	57	-16	19.6	1.46	2.0	Waverly	59	-23	14.5	2.28	12.1
Mount Carmel†	.....			4.52	6.1	Algona*†	52	-27	12.2	1.38	.....	Webster City	54	-21	15.4	1.24	5.2
Mount Pulaski	60	-14	25.1	5.19	13.5	Aita†	46	-24	11.4	1.62	13.2	Westbend*†	51	-25	12.0	1.66	12.0
Mount Vernon	70	-2	29.2	3.57	1.5	Amano†	60	-20	17.0	2.47	7.8	Wilton Junction†	68	-20	19.4	3.18	13.0
New Burnside†	65	-6	32.6	2.70	2.0	Ames†	55*	-20	16.7	1.29	8.8	Winterset†	60	-18	18.3	1.68	9.5
Olney*†	64	-5	30.2	3.77	7.1	Atlantic†	54	-15	14.1	0.88	7.0	<i>Kansas.</i>					
Oregon†	59	-28	18.6	3.76	.....	Atlantic (near)	53	-16	17.9	1.42	8.5	Abilene†	58	-4	28.0	0.90	6.0
Oswego*†	50	-24	18.7	6.06	10.5	Audubon	53	-20	17.8	0.80	6.0	Achilles*†	69*	-13	19.74	0.05	0.5
Ottawa†	63	-21	21.4	5.98	9.5	Belnknap	63	-17	19.8	4.20	12.0	Altoona*†	60	-4	27.8	1.46	5.5
Palestine†	68	-6	28.6	3.88	9.5	Belleplaine	58	-22	16.6	1.53	9.8	Anthony	.....			0.57	0.5
Peoria*†	.....			7.64	8.0	Bonaparte†	65	-16	21.8	4.42	4.0	Assaria*†	54	-5	25.9	0.99	8.8
Peoria*†	68	-16	24.4	5.39	9.0	Britt	62	-24	11.5	1.67	2.9	Atchison†	64	-8	24.8	1.21	8.4
Philot†	62	-15	22.6	4.35	10.0	Carroll	55	-20	15.0	2.34	11.0	Augusta	57	-1	20.6	1.05	3.8
Plumhill†	65	-1	29.4	3.86	6.5	Cedar Rapids†	63	-21	17.1	1.90	7.9	Beloit†	55	-2	28.2	0.53	4.1
Rantoul†	60	-16	23.0	3.89	11.8	Centerville	68	-17	24.2	1.22	5.5	Blaine	54	-16	24.2	1.37	9.2
Reynolds†	68	-20	20.3	3.54	7.6	Charles City†	58	-27	12.4	1.58	11.8	Campbell	58	9	25.4	1.02	12.6
Riley†	56	-24	18.7	4.45	8.5	Clarinda†	59	-13	21.7	1.31	8.5	Colby†	62	-13	26.6	0.23	T.
Robinson*†	65	-8	25.2	4.08	8.3	Clinton	62	-21	20.4	8.27	6.0	Columbus†	68	-3	29.9	5.46	7.4
Rockford†	57	-23	19.4	4.73	15.0	College Springs	66	-18	23.5	0.52	5.9	Coolidge†	58	-10	27.9	0.10	1.0
Rose Hill*†	64	-6	30.0	4.45	7.5	Corning†	61	-16	20.2	0.85	8.5	Cunningham†	52	-6	29.4	0.65	5.8
Roundgrove†	65	-21	21.2	2.91	.....	Council Bluffs	.....					Delphos*†	54	-6	25.6	0.93	8.8
St. Charles*†	58	-22	20.9	6.04	10.8	Cresco†	54	-20	11.2	1.96	5.8	Downs...	65	-7	28.7	0.16	1.5
St. John*†	63	-1	29.5	3.17	T.	Decorah†	57	-27	13.6	2.28	5.5	Dresden*†	65	-8	26.6	0.85	8.5
Scalen Mound	60	-24	17.9	1.96	11.2	Delaware*†	59	-24	14.1	2.28	6.2	Effingham	65	-8	26.6	0.50	5.0
Streator†	60	-18	20.6	5.65	10.5	Denison†	54	-18	18.8	0.75	7.5	Elgin*†	62	-3	28.6	1.10	4.6
Sycamore†	57	-23	19.4	4.64	6.9	Dows	65	-25	14.7	1.65	8.5	Ellinwood†	59	-4	27.9	1.01	11.1
Tiskilwa*†	58	-20	18.8	5.81	10.0	Eldkader†	64	-30	14.2	2.31	12.8	Emporia*†	58	-3	29.9	1.25	5.0
Tuscola†	63	-12	24.6	4.39	6.0	Estherville	45	-26	11.4	1.20	9.0	Englewood†	62	-1	27.8	1.18	14.0
Walnut†	62	-21	22.4	5.01	5.7	Fairfield†	60	-17	19.7	3.09	3.5	Eureka†	60	-10	27.0	1.48	6.0
Wheaton*†	59	-20	19.2	6.61	16.5	Fayette†	60	-24	14.6	2.73	11.4	Eureka Ranch†	58	-10	27.0	0.89	6.0
Winnebago†	59	-23	18.9	3.74	13.0	Fonda	56	-28	15.7	1.57	11.0	Fall River	67	-4	32.2	1.81	5.2
Zion†	59	-26	18.8	2.92	.....	Forest City	54	-25	10.4	1.58	11.0	Fort Riley†	67	-4	29.2	0.99	5.4
<i>Indiana.</i>						Fort Madison*†	62	-12	25.5	6.18	9.6	Fort Scott	65	-1	29.4	4.77	8.0
Anderson†	62	-18	24.4	2.78	10.2	Galva†	47	-22	13.6	1.45	13.3	Frankfort	62	-6	29.3	0.45	4.5
Angola*†	56	-20	22.9	4.30	17.8	Gardengrove	60	-18	18.8	2.15	8.0	Garfield	61	-5	27.4	0.60	9.1
Auburn†	59	-19	22.4	2.86	.....	Glenwood†	53	-15	18.6	0.77	6.0	Gibson*†	63	-15	29.2	T.	T.
Bloomington†	64	-7	27.4	3.17	9.5	Grand Meadow*†	56	-23	18.5	2.98	12.5	Goodland	62	-5	27.0	0.20	2.0
Bluffton†	58	-21	22.0	2.74	9.5	Greenfield†	57	-17	18.6	1.58	7.4	Grove*†	60	-6	29.0	T.	T.
Bright†	64	-12	27.6	2.97	11.1	Grinnell†	59	-20	16.9	1.98	8.5	Grenola*†	58*	-1	29.8	0.95	4.0
Butlerville†	65	-9	28.2	3.08	8.6	Grundy Center	60	-23	14.6	1.01	4.0	Halstead	60	-6	28.6	0.88	5.2
Cambridge City†	63	-15	24.6	2.69	7.6	Hopeville	59	-16	19.3	1.23	.....	Horton	58	-6	28.8	1.40	5.5
Columbia City*†	58	-20	21.9	3.78	13.0	Humboldt†	53	-28	15.1	1.55	13.0	Hutchinson†	65	-8	32.3	0.95	6.0
Columbus†	65	-11	27.1	2.74	7.6	Independence†	57	-24	14.2	1.08	10.8	Independence†	64	-8	31.3	2.46	4.4
Connorsville†	62	-14	24.4	2.46	5.8	Indiana†	61	-18	21.1	3.43	11.2	Lakin†	65	-7	32.8	0.01	0.1
Delphi†	64	-18	31.1	3.79	9.0	Iowa City†	62	-18	20.2	1.08	11.0	Lawrence	61	-4	27.4	1.51	5.8
Edwardsville*†	65	-6	30.6	3.23	8.8	Iowa City b	62	-18	20.2	1.08	11.0	Lebo†	60	-3	27.5	1.62	5.6
Evansville†	62	-18	24.6	1.99	1.2	Iowa Falls†	57	-26	18.8	1.95	10.0	Macksville	56	-4	27.9	0.47	10.0
Farmland†	61	-18	24.6	1.99	10.3	Kenoshaqua	64	-14	23.2	5.60	4.0	McPherson†	50	-5	25.7	1.16	10.0
Franklin*†	68	-10	26.1	2.38	11.0	Knoxville	61	-17	20.4	1.10	6.0	Manhattan b	58	-5	27.8	1.32	7.8
Greencastle†	63	-14	25.8	3.96	9.3	Lansing	61	-25	17.3	2.88	6.5	Manhattan c	60	-5	28.2	1.47	5.3
Greensburg†	67	-11	26.9</														

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
Kansas—Cont'd.						Louisiana—Cont'd.						Massachusetts—Cont'd.					
Pleasant Dale.....	0	—	0	2.50	15.5	Boston	72	10	44.0	4.81	2.0	Leeds	0	—	0	Ins.	Ins.
Powhattan.....	57	—	8	24.4	1.15	Southern University†.....	74	21	50.0	2.80		Leicester Hill.....	51	—	15	24.0	28.0
Pratt.....	57	—	8	26.4	1.60	Sugar Ex. Station†.....	79	23	50.0	3.44		Leominster.....	54	—	3	22.6	21.0
Rome*†.....	57	—	9	31.4	1.00	Sugartown†.....	74	18	48.6	7.64		Long Plain*†.....	58	—	3	27.0	17.0
Russell†.....	—	—	—	1.80	12.2	Thibodeaux.....	—	—	—	3.39	1.0	Lowell a.....	56	—	1	26.0	4.35
Salina†.....	57	—	10	27.1	1.00	Venice†.....	76	26	53.2	5.69		Lowell b.....	58	—	3	29.4	—
Scott City.....	62	—	12	27.6	0.18	Wallace.....	75	20	50.2	3.51	0.8	Lowell c.....	57	—	3	28.2	—
Sedan†.....	62	—	12	31.9	2.10	White Sulphur Springs.....	—	—	—	8.78	2.0	Ludlow Center.....	57	—	2	21.7	4.10
Sharon Springs*†.....	76	—	9	26.0	—	Maine.	—	—	—	—	—	Lynn a.....	53	—	4	26.3	2.37
Ulysses†.....	61°	—	8	26.1°	0.55	Bar Harbor.....	54	—	11	21.4	5.5	Mansfield*†.....	56	—	2	25.2	18.8
Wallace†.....	70	—	12	27.0	0.01	Belfast*†.....	52	—	11	20.5	3.98	Middleboro.....	55	—	2	26.4	4.52
Wamego*†.....	58	—	4	35.4	1.24	Calais†.....	53	—	14	19.3	4.74	Milton.....	56	—	6	27.2	16.0
Wellington*†.....	60	—	2	32.9	0.91	Cumberland Mills.....	52	—	10	21.2	4.03	Monson.....	56	—	6	26.4	4.18
White Rock.....	—	—	—	0.40	3.5	Fairfield.....	54	—	17	18.6	3.31	Mount Nonotuck.....	57	—	6	27.0	17.0
Winona*†.....	74	—	8	31.2	0.02	Farmington†.....	44	—	15	19.2	5.45	Mount Wachusett.....	58	—	6	26.0	3.81
Yates Center.....	62	—	5	28.6	1.51	Flagstaff†.....	50	—	21	14.2	2.90	Mystic Lake.....	—	—	—	—	—
Kentucky.	—	—	—	—	—	Fairfield.....	52	—	22	10.2	1.44	Mystic Station.....	—	—	—	—	—
Alpha†.....	70	—	6	37.0	4.55	Gardiner.....	54	—	12	20.1	4.51	Natick*†.....	54	—	2	24.7	5.62
Ashland*†.....	75	—	8	29.6	—	Indian Stream.....	48	—	23	18.8	3.99	New Bedford a.....	49	—	4	27.4	3.97
Bardstown†.....	69	—	1	31.8	2.51	Kineo†.....	46	—	23	14.4	2.82	New Bedford b.....	54	—	2	28.0	3.73
Blandville†.....	67	—	0	32.6	4.43	Lewiston.....	50	—	8	21.8	5.17	North Billerica.....	56	—	1	26.8	3.60
Bowling Green a*†.....	68	—	6	31.4	3.44	North Berwick*†.....	53	—	7	22.9	5.35	Pittsfield.....	55	—	4	23.0	19.8
Bowling Green b†.....	73	—	3	33.6	3.34	North Bridgton.....	48	—	14	20.6	4.59	Plymouth*†.....	53	—	6	29.8	16.0
Burnside†.....	—	—	—	2.76	3.0	Orono.....	52	—	18	16.6	3.08	Princeton.....	—	—	—	—	—
Caddo†.....	67	—	10	28.4	2.77	Petit Menan*†.....	47	—	9	23.9	—	Quinapoxet.....	50	—	4	23.2	4.80
Canton*†.....	66	—	8	34.8	3.90	Whislaw.....	55	—	12	19.8	—	Roberts Dam.....	—	—	—	—	—
Carlisle.....	—	—	—	2.80	6.5	Maryland.	—	—	—	—	—	Salem.....	—	—	—	—	—
Carrollton†.....	67	—	6	30.8	2.54	Bachmans Valley.....	60	1	27.0	2.20	6.0	Somerset*†.....	60	—	0	28.9	3.88
Cattletburg*†.....	66	—	5	30.3	3.21	Boottcherville ²	—	—	23.6	1.90	10.0	South Clinton.....	—	—	—	—	—
Earlinton.....	66	—	2	34.0	3.70	Charlotte Hall†.....	64	5	33.2	1.75	6.5	Springfield Armory.....	58	—	3	24.2	3.99
Edmonton†.....	68	—	10	33.0	2.87	Cherryfields† ³	—	—	31.8	1.93	8.8	Sterling.....	—	—	—	—	—
Eubank*†.....	60	—	10	28.3	2.23	Chestertown†.....	68	8	30.0	2.40	7.5	Taunton b.....	56	—	0	26.6	4.33
Falmouth†.....	—	—	—	2.55	8.0	Collegepark.....	54	—	25	27.5	1.76	Taunton c.....	56	—	5	26.0	4.23
Fords Ferry†.....	63	0	38.5	2.90	3.0	Cumberland a.....	60	3	27.2	1.76	5.0	Turners Falls.....	46	—	3	21.2	8.11
Frankfort†.....	70	—	6	30.0	2.97	Cumberland b.....	64	8	31.6	1.80	7.5	Wakefield†.....	57	—	3	26.4	4.16
Franklin†.....	66	—	1	33.7	4.50	Darlington†.....	65	5	29.4	1.93	6.0	Waltham.....	—	—	—	—	—
Georgetown.....	68	—	7	29.8	—	Deerpark.....	—	—	—	2.80	20.0	Webster.....	—	—	—	—	—
Greensburg†.....	70	—	8	33.2	3.63	Easton†.....	65	8	30.9	2.04	5.5	Westboro†.....	57	—	6	28.0	2.44
Henderson†.....	67	—	3	34.7	3.85	Ellicott City.....	59	8	31.4	1.98	7.0	Weston.....	57	—	0	26.6	18.7
Hopkinsville†.....	65	—	2	34.8	4.47	Fallston ⁴	60	6	29.6	2.19	5.5	Williamstown*†.....	55	—	6	23.4	14.5
Leitchfield†.....	67	—	5	30.6	3.36	Flintstone.....	60	—	6	27.4	2.02	Winchendon.....	—	—	—	—	—
Lexington*†.....	66	—	6	30.3	2.54	Frederick.....	64	—	5	28.6	1.89	Winchester.....	—	—	—	—	—
Louisville*.....	—	—	—	2.10	3.0	Grantsville.....	56	—	9	22.7	3.97	Worcester a.....	52	1	24.7	3.41	—
Louisville b*†.....	70	—	16	31.4	—	Greatfalls ⁵	63	6	32.6	1.22	—	Worcester b.....	55	2	26.3	3.26	14.0
Lyndon.....	69	—	5	29.8	2.48	Greenspring Furnace.....	63	4	29.2	1.96	5.0	Michigan.	—	—	—	—	—
Marrowbone†.....	69	—	11	32.0	2.98	Hagerstown†.....	62	4	30.4	0.87	5.5	Adrian.....	58	—	23	21.8	2.36
Maysville*†.....	65	—	6	31.6	—	Jewell†.....	66	6	31.2	2.19	4.0	Alma.....	54	—	8	29.6	8.6
Middlesboro†.....	67	—	13	31.0	4.03	Johns Hopkins Hospital.....	61	5	29.5	1.81	—	Ann Arbor.....	54	—	16	20.7	18.0
Mount Sterling†.....	67	—	7	28.8	3.34	Laurel.....	—	—	—	2.05	5.0	Arbela.....	54	—	11	22.3	6.8
Munfordville ¹	69	0	34.1	—	—	McDonogh ⁶	61	4	28.6	—	—	Baldwin.....	56	—	13	19.0	18.9
Owensboro†.....	67	—	3	32.0	3.73	Mardela Springs†.....	65	6	32.0	2.48	9.8	Ball Mountain.....	58	—	14	22.8	9.3
Owenton†.....	65°	—	7	31.4°	2.71	Mount St. Mary's Coll. ⁷	60	8	29.0	2.26	7.1	Baraga.....	56	—	20	25.4	3.81
Paducah a†.....	69	4	35.7	3.94	1.0	New Market.....	62	4	28.8	1.66	5.0	Battle Creek.....	56	—	12	23.2	18.4
Paducah b†.....	69	1	32.8	4.06	Pocomoke City.....	64	12	37.1	1.95	4.0	Bay City b.....	54	—	6	25.7	3.70	
Pleasure Ridge Park†.....	69	—	6	30.8	3.50	Princess Anne.....	64	3	32.2	1.65	9.0	Benton Harbor.....	59	—	6	25.4	4.31
Princeton.....	65	—	9	32.3	4.13	Sharpeburg.....	62	3	37	1.31	4.7	Benzonia.....	56	—	5	23.1	3.95
Richmond†.....	70	—	7	31.8	2.13	Solomons†.....	56	10	33.2	1.68	8.2	Berlin.....	54	—	16	21.6	18.5
Russellville†.....	68	—	4	35.3	4.25	Sunnyside.....	60	—	11	22.8	3.07	Berrien Springs.....	59	—	14	22.4	4.25
St. John†.....	67	—	5	30.9	3.41	Taneytown†.....	63	4	28.0	1.84	7.0	Big Rapids.....	55	—	8	20.6	6.68
Sandyhook.....	—	—	—	2.77	2.2	Van Bibber.....	63	7	28.6	2.08	—	Birmingham.....	56	—	15	23.1	4.6
Sheilbyville†.....	67	—	7	30.3	2.95	Western Port.....	59	—	1	29.9	1.88	Boon.....	53	—	17	18.1	7.24
Vanceburg†.....	64	—	5	28.2	—	Westminster.....	60	2	28.8	—	9.2	Bronson.....	56	—	18	21.2	8.48
Williamsburg†.....	68	—	11	35.2	3.74	Woodstock.....	61	4	29.2	1.78	5.5	Calumet.....	46	—	13	21.1	3.01
Louisiana.	—	—	—	—	Massachusetts.	—	—	—	—	—	Carsonville.....	54	—	8	21.3	6.4	
Abbeville.....	76	20	49.6	5.36	Adams.....	58	—	5	24.9	—	Charlevoix.....	46	—	1	28.2	6.40	
Alexandria†.....	74	17	46.8	7.59	Amherst.....	55	—	1	25.6	3.78	Cheboygan.....	51	—	6	19.8	4.69	
Amitite†.....	—	—	—	5.19	Andover†.....	55	—	3	25.8	3.75	Clinton.....	55	—	19	21.9	2.95	
Bastrop†.....	76	5	46.5	5.92	Ashland.....	—	—	—	—	—	East Tawas.....	44	—	5	21.2	3.17	
Baton Rouge†.....	75	20	49.1	4.83	Attleboro.....	—	—	—	—	—	Escanaba†.....	42	—	19	17.9	2.95	
Calhoun†.....	75	10	42.6	7.06	Bedford.....	57	0	26.1	4.09	19.5	Fairview.....	59	—	18	21.1	15.8	
Cameron†.....	—	—	—	10.73	Bluehill (summit).....	57	—	1	25.4	4.16	Fitchburg.....	55	—	16	21.0	2.48	
Cheneyville†.....	77	15	48.0	6.69	Boston a.....	—	—	—	—	—	Flint.....	54	—	12	21.3	6.5	
Clinton†.....	72																

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
Michigan—Cont'd.						Minnesota—Cont'd.						Missouri—Cont'd.					
Ludington.....	55	-3	24.0	5.54	16.9	New Ulm†.....	45	-28	9.0	2.08	18.0	Houston.....	64	-2	33.3	6.24	3.0
Luzerne.....	51	-10	16.8	3.41	8.9	Park Rapids†.....	39	-42	1.5	2.25	20.4	Houstonia.....	68	-11	31.4	5.18	6.8
Mackinaw City.....	50	-4	19.8	2.07	4.0	Pine River ¹	42*	-38	3.5	2.79	29.9	Humansville.....	68	-11	31.4	5.36	3.8
Madison.....	55	-19	22.2	2.38	12.7	Pleasant Mounds†.....	47	-27	9.6	1.57	18.0	Irena.....	62	-4	31.2	4.49	5.2
Manciona.....	52	-4	19.0	4.66	26.5	Pokegama Falls ¹	39*	-49	1.8	1.74	18.6	Ironton†.....	66	-1	30.0	7.82	5.0
Manistee.....	56	-5	23.4	5.07	23.5	Rolling Green.....	45	-25	9.3	1.90	11.0	Jefferson City†.....	63	-8	24.4	1.95	5.9
Manistique.....	44	-15	18.9	3.87	19.5	Roseau.....	39	-37	0.5	1.51	12.9	Kidder.....	66	-2	30.6	5.10	3.5
Mayville.....	52	-10	22.2	3.89	10.8	St. Charles†.....	54	-27	12.6	2.25	18.0	Lamar.....	66	-2	30.6	5.08	1.5
Middle Island ¹⁰	47	-2	24.0	.....	.....	St. Cloud.....	42	-38	5.7	2.75	23.5	Lamonte.....	66	-2	30.6	5.08	1.5
Midland.....	54	-9	21.7	4.36	.....	St. Olaf.....	38	-27	4.4	1.59	17.9	Lebanon.....	65	0	30.8	7.60	3.0
Mottville.....	58	-21	21.1	4.36	17.4	St. Peter.....	40*	-37	3.7	2.18	22.7	Lexington.....	66	-5	27.8	3.95	4.5
Mount Clemens.....	56	-15	22.7	1.38	6.8	Sandy Lake Dam ¹	40*	-37	3.7	2.18	22.7	Liberty.....	63	-3	26.2	2.12	3.0
Mount Pleasant ^b	53	-8	21.6	4.24	3.7	Shakopee ^d	47*	-30	9.2	1.56	18.5	McCune ^{*†1}	60	-8	25.2	7.06	5.5
Muskegon.....	37	-1	28.3	7.72	16.0	Tower†.....	45	-45	2.9	1.92	19.2	Macomb.....	66	-2	30.6	5.32	5.0
Newberry.....	51	-12	17.5	3.98	21.0	Two Harbors†.....	40	-24	11.3	1.94	18.5	Mansfield.....	66	-10	31.2	7.10	4.0
North Marshall.....	56	-15	20.1	5.26	16.0	Wabasha [*]	58	-27	12.7	3.08	6.0	Marblehill.....	68	-10	31.2	5.86	4.0
Northport.....	55	0	23.6	8.92	18.0	Willmar†.....	41	-27	6.2	1.77	10.2	Marshall†.....	70	-5	24.3	4.44	4.6
Old Mission.....	55	-2	22.7	8.11	18.0	Winona.....	59	-23	13.9	2.00	4.5	Maryville.....	75	-14	21.6	1.74	6.0
Olivet.....	56	-11	22.6	4.80	9.4	Worthington.....	38	-27	9.0	0.62	5.7	Mexico ^t	67	-5	26.7	6.56	3.1
Ovid.....	55	-11	22.8	4.18	7.0	Zumbrota ¹	52*	-33	10.5	.....	.....	Mine La Motte†.....	61	-3	31.8	5.26	1.3
Owosso.....	54	-12	21.8	4.30	8.8	Mississippi						Mineralspring.....	73	-2	32.6	5.53	3.0
Parkville.....	55	-10	25.6	16.0		Agricultural College.....	73	11	41.0	4.41	1.1	Montreal [*]	68	-4	26.1	6.26	3.5
Petoskey.....	54	-2	21.8	3.21	14.2	Austin†.....	68	18	39.8	7.71	T.	Mount Vernon.....	65	-6	31.1	4.98	5.5
Plymouth.....	56	-16	21.6	2.10	11.0	Batesville.....	65	10	39.6	5.08	0.4	Neosho.....	69	-4	33.0	4.20	2.0
Pontiac.....	55	-13	22.4	2.88	14.0	Bay St. Louis.....	72	19	49.6	2.41		Nevada.....	66	-2	30.8	3.98	4.8
Port Austin.....	53	-2	22.2	4.17	.....	Biloxi†.....	70	19	47.9	4.88	T.	New Haven ¹	68	-2	33.2	7.70	2.0
Powers.....	49	-23	17.0	2.18	6.0	Briers†.....	70	16	44.4	7.47		New Madrid.....	66	-4	34.8	6.11	1.0
Reed City.....	54	-10	20.3	4.92	11.0	Brockhaven†.....	70	11	45.2	7.05	1.0	New Palestine ^{*†1}	70	-2	29.7	5.48	2.8
Rockwood.....	48	-20	18.7	4.30	31.5	Canton†.....	69	15	44.6	5.50	0.5	Oaklound.....	66	-2	30.8	3.82	2.0
Rogers City.....	58	-11	19.8	2.38	11.0	Columbus ^a†.....	.....	.....	.....	.....		Oakridge ^{*4}	62	-2	31.0	5.41	4.0
Romeo.....	54	-14	23.4	.....	.....	Columbus ^b	73	9	43.0	.....		Olden†.....	62	-3	31.0	6.61	2.7
Saginaw.....	55	-6	23.6	5.36	8.3	Crystal Springs†.....	68	15	43.9	7.57	1.0	Oregon ^a	61	-8	24.2	1.74	7.8
St. Ignace.....	45	-15	18.4	2.39	4.0	Fayette†.....	71	14	43.6	7.75	1.0	Oregon ^b	59	-9	23.2	1.86	5.6
St. Johns.....	54	-12	20.0	4.69	.....	French Camps†.....	70	3	41.0	4.63	0.9	Osceola†.....	66	-2	30.8	5.40	1.5
Sandbeach ^a	50	-8	23.0	.....	French Camps ^b	70	0	39.4	6.28	1.0	Oto.....	68	-10	26.6	5.49	1.3	
Sidnaw.....	43	-23	18.1	2.88	19.0	Fulton†.....	70	0	41.0	4.63		Palmira ¹	68	-10	26.6	7.14	8.0
Somerset.....	59	-17	19.7	3.89	14.0	Greenville ^a	69	14	41.4	4.50	1.8	Phillipsburg ^{*†1}	64	-5	29.4	8.05	4.0
South Haven.....	58	1	24.0	4.47	27.7	Greenville ^b	74	9	41.6	4.31		Pickering ³	62	-10	24.5	1.91	7.8
Stanton.....	54	-11	21.4	3.85	11.2	Holly Springs.....	67	8	38.6	4.77		Platte River ³	66	-6	21.4	3.80	3.0
Thomaston.....	48	-29	10.0	4.40	48.6	Jackson†.....	71	14	43.0	5.70	0.5	Poplar Bluff.....	67	0	34.4	5.90	1.5
Thornville.....	58	-8	22.6	3.89	9.0	Kosciusko†.....	69	7	41.8	5.88	1.0	Potosi.....	57	-13	24.2	4.68	5.0
Traverse City.....	53	-6	23.3	3.88	16.5	Leavesville†.....	75	15	48.9	5.63	1.5	Princeton ¹	63	-12	22.8	3.05	6.0
Valley Center ¹	49	-11	18.8	1.48	5.0	Logtown†.....	72	20	50.2	3.45	0.5	Rhinelander.....	66	0	30.2	7.48	1.5
Vandalia.....	52	-19	22.6	7.42	30.9	Louisville†.....	70	8	42.5	5.87	1.0	Richmond.....	64	-5	25.8	8.47	4.8
Waspepli.....	58	-19	19.8	4.24	.....	Macon†.....	74	18	41.6	3.74		Rolla.....	66	-2	30.8	7.75	3.8
Waverly.....	58	-14	21.4	8.81	39.3	Magnolia†.....	71	16	46.8	5.51	1.2	St. Charles.....	64	-4	30.9	8.84	4.8
West Harrisville.....	50	-10	18.6	2.93	5.0	Mayersville.....	72	10	48.4	5.55	2.0	St. James ²	62	0	28.4	1.69	4.0
Wetmore.....	48	-15	17.4	3.26	24.0	Meridian†.....	72	19	43.4	5.57		St. Joseph ¹	62	-3	28.9	3.86	3.0
Ypsilanti.....	57	-17	20.9	2.03	11.6	Moss Point.....	75	17	48.2	4.82	2.2	St. Louis (V. O.).....	63	-3	28.9	3.86	3.0
Adat.....	55	-55	.....	0.44	2.3	Natchez†.....	75	17	46.6	7.06	0.7	Sarcocie ²	60	0	29.0	4.65	3.4
Albert Lea†.....	53	-30	11.4	3.03	23.0	Okolona†.....	75	8	39.2	4.88	T.	Shebina.....	61	-1	36.6	8.10	5.0
Alexandria†.....	58	-38	4.1	2.15	20.3	Palo Alto†.....	71	7	41.1	6.17	3.1	Stileston.....	67	1	36.6	4.81	1.0
Beardsley†.....	40	-27	4.6	1.83	10.8	Pontotoc.....	71	6	41.6	4.69	1.2	Steffenville.....	68	-4	29.6	4.95	10.0
Belle Plaine ¹	31	-32	8.7	0.20	2.0	Port Gibson†.....	71	17	46.0	6.82	0.3	Sublett.....	64	-14	22.2	7.06	5.6
Berndji.....	40	-40	1.2	.....	Rosedale†.....	70	15	40.6	6.75	T.	Trenton.....	60	-9	24.6	1.88	6.0	
Bingham Lake.....	48	-38	10.8	.....	Stonington ¹	70	16	45.2	.....		Virgil City.....	64	-4	26.6	8.78	1.5	
Bird Island.....	42	-27	8.5	1.49	10.7	Thornton†.....	72	14	45.1	2.00	3.0	Warrenton.....	64	-4	26.6	3.16	2.0
Blooming Prairie†.....	52	-31	9.8	1.10	8.0	Topton ¹	70	20	45.4	3.81	0.5	Wheatland.....	66	-2	28.5	3.16	2.0
Bonwell.....	44	-27	8.6	1.12	14.0	Water Valley ^{†1}	69	-2	39.2	6.01	1.5	Willow Springs.....	66	-6	33.6	7.58	2.0
Caledonia†.....	55	-27	13.6	2.43	6.5	Waynesboro ^b	76	.....	.....	.....		Zeltonia ¹	66	0	34.8	5.48	1.8
Cambridge.....	43	-24	1.44	1.23	13.8	Woodville†.....	71	15	46.6	7.01	2.0	Montana					
Camden.....	43	-24	9.0	2.18	19.0	Yazoo City†.....	72	18	42.6	4.48	1.0	Augusta ¹	55	-41	23.4	0.87	5.8
Colegerville.....	43	-27	8.4	1.23	13.8	Akron.....	.....	.....	.....	.....		Bigtimber ¹	62	-28	25.8	1.00	10.0
Crookston†.....	37	-31	0.6	0.37	7.0	Appleton City.....	66	0	30.4	5.70	3.5	Billings†.....	68	.....	.....	0.90	9.0
Dawson.....	45	-43	1.9	1.73	12.5	Arthur ^{*†3}.....	.....	.....	.....	.....		Boulder.....	62	-35	11.6	.....	.....
Fairbault.....	44	-29	6.6 ^a	1.90	18.0	Avalon.....	65	-10	28.7	3.65	4.4	Bozeman [†]	68	-24	18.8	1.51	15.1
Farmington†.....	48	-35	7.0	1.77	16.5	Bethany.....	62	-11	28.1	1.05	5.0	Bozeman Exper. Stat'n.....	68	-24	18.8	1.51	15.1
Fergus Falls†.....	40	-29	7.0	1.64	18.4	Birchtree.....	62	-8	31.6	7.88	2.0	Butte†.....	68	-27	18.1	1.20	11.0
Glencoe ¹																	

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>Montana—Cont'd.</i>						<i>Nebraska—Cont'd.</i>						<i>New Hampshire—Con'd.</i>					
St. Pauls †.....	50	-40	17.8	0.14	1.4	Palmer b.....	50	0	1.10	6.0		Hanover	51	-13	19.2	2.88	24.5
Sun River.....	50	-30	23.2	T.	T.	Plattsburgh †.....	50	-10	24.4	1.21	11.0	Keene	53	-8	21.8	2.55	17.2
Troy.....	45	-4	26.4	0.90	2.0	Ravenna a.....	63	-10	24.4	0.60	3.8	Lancaster	50	-20	15.1	2.94	21.5
Utica †.....	50	-20	22.0	0.80	3.0	Ravenna b.....	60	-4	25.7	0.59		Nashua	55	-7	23.7	4.19	19.8
Virginia City †.....	47	-25	19.8	0.31	2.1	Redcloud a.....	48	-7	24.2	0.93	9.3	Newton †.....	56	-6	24.4	4.05	19.0
Wibaux †.....	49	-21	20.8	0.40	4.0	Redcloud b*.....	57	-14	25.2	0.40	4.0	North Conway	53	-15	20.0	5.24	26.5
Yale †.....						Rulo*.....	54	-4	26.6	0.70	7.0	Peterboro	56	-12	21.5	3.35	24.4
<i>Nebraska.</i>						St. Libby	56	-10	23.8	1.11	6.0	Plymouth	49	-13	17.6	3.27	25.5
Agee*.....	50	-14	18.8	1.37	9.8	St. Paul	55	-8	25.1	0.90	6.0	Sanbornton †.....	56	-12	19.9	3.30	25.0
Alliance*.....	52	-18	18.9	0.48	4.5	Salem*.....	52	-4	27.0	0.42	3.2	Stratford	51	-18	18.2	2.23	12.5
Ansley †.....	64	-15	22.6	0.40	2.5	Santee Agency †.....	50	-20	14.9	1.37	12.5	Warner					
Arapaho*.....	50	-18	21.9	0.40	1.0	Sargent						West Milan	48	-24	13.8	2.95	23.5
Arberville*.....	47	-8	22.4	1.72	18.0	Sargent						<i>New Jersey.</i>					
Arcoa.....	65	-12	24.6	0.82	6.0	Schuyler						Allaire	56	4	31.5		
Ashland a†.....	50	-10	23.5	0.82	4.0	Seneca*.....	60	-12	23.0	0.55	5.5	Asbury Park	49	6	27.3	3.48	16.0
Ashton.....	56	-13	22.0	0.28	1.0	Seward*.....	47	-7	23.4	0.80	8.0	Barnegat	64*	5	31.9	8.20	14.0
Auburn*.....	56	-10	24.2	1.02	4.5	Springfield*.....	48	-15	18.2	0.74	6.7	Bayonne	53	8	30.0	2.98	18.1
Aurora*.....	50	-6	24.6	0.62	6.2	Springview	56	-17	17.9	1.15	4.8	Beachhaven	50	8	30.4	2.14	7.2
Bassett.....	57	-19	18.0	1.50	15.0	Stanton*.....	45	-15	17.4	0.61	10.5	Belvidere	57	2	27.0	2.57	9.8
Beatrice †.....	50	-11	23.4	0.80	3.0	State Farm	51	-9	23.8	0.31		Beverly †.....	61	4	29.8	2.38	11.3
Beaver City †.....	61	-14	27.6	0.28	0.5	Strang*.....	50	-7	25.8	0.60	6.0	Billingsport*.....	60	7	28.3	2.45	8.0
Bluehill*.....	53	-6	25.1	0.68	5.0	Stratton						Blairstown	56	3	27.8	2.26	10.0
Brattton*.....	55	-10	22.4	0.90	8.0	Stromsburg						Boonton	52	0	26.3	2.67	5.8
Brokenbow*.....	60	-10	24.2	0.10	1.0	Superior*.....	50	-8	20.9	0.35	2.0	Bridgeton	60	10	23.2	2.38	7.0
Burrough.....						Sutton	53	-10	23.2	1.97	11.6	Camden	61	6	29.8	2.11	8.1
Burwell.....						Syracuse						Cape May	52	10	29.5	2.06	10.0
Callaway †.....	61	-12	23.2	0.35	4.0	Tecumseh b†.....	53	-10	25.2	0.65	6.5	Cape May C. H. †.....	57	9	32.6	2.28	15.0
Central City*.....	50	-6	23.8	0.91	8.0	Weeping Water*.....	49	-13	18.1	1.00	14.5	Charlottesville	52	3	27.0	3.26	7.0
Chester*.....	50	-6	23.9	0.60	3.0	Whitman						Chester	58	0	24.6	3.15	13.0
Columbus †.....	53	-12	20.9	0.69	6.0	Thedford*.....	60	-16	20.8	0.75	7.5	Clayton	61	5	30.2	2.24	7.0
Cornlea.....						Turlington †.....	48	-20	18.8	0.66	7.1	College Farm †.....	58	5	29.4	2.39	14.3
Creighton †.....	47	-17	15.4	2.10		Valentine †.....	63	-20	19.1	1.23		Deckertown	57	-2	27.1	1.70	8.0
Crete.....	50	-10	23.4	1.45	13.0	Wakefield						Dover	54	1	27.3	2.39	11.0
Culbertson						Wallace*.....	52	-14	21.8	0.28	2.4	Egg Harbor City	60	5	29.2	2.36	9.5
Curtis a.....	68	-11	23.8	T.	T.	Weeping Water*.....	49	-13	18.1	1.00	14.5	Egg Island					
David City*.....	46	-12	21.1	0.85	8.0	Whitman						Elizabeth	54	3	29.0	3.67	23.0
Divide.....						Wilber*.....	52	-6	26.7	0.68	4.0	Englewood	57	0	27.6	4.21	15.1
Dunning.....						Willard						Franklin Furnace	57	-6	24.9	2.18	8.0
Edgar*.....	49	-7	23.8	1.20	7.0	Wilsonville*.....	60	-18	26.6	0.88	0.5	Freeshold	58	2	29.6	2.35	6.0
Elba.....						Woodlawn						Friesburg					
Ericson*.....	53	-12	20.2	1.00	9.0	York*.....	50	-7	25.5	0.50	5.0	Gillette	55	7	27.0	3.51	12.5
Ewing †.....						<i>Nevada.</i>						Hampton					
Fairbury †.....	50	-8	25.2	0.44	5.0	Austin	46	10	30.2	1.30	13.0	Hanover	51	4	28.6	3.05	8.0
Fairmont*.....	48	-7	24.9	0.68	6.0	Battle Mountain*.....	52	14	23.7	0.69	0.5	Hightstown	60	4	28.4	2.87	18.5
Filley.....						Beowawe*.....	52	10	21.2	0.55	1.0	Imlayshtown	62	5	29.4	2.88	19.5
Fort Robinson	68	-21	22.6	1.90	19.0	Candelaria	63	14	27.4	0.08	5.0	Junction					
Franklin †.....						Carlin*.....	50	-5	26.7	T.		Lambertville	59	5	28.6	3.20	17.5
Fremont*.....	45	-12	20.1	0.92	9.0	Carson City	55	10	23.5	1.47	7.3	Moorestown	61	6	30.2	2.41	10.8
Geneva*.....	50	-10	24.8	0.60	8.5	Cloverdale*.....	60	20	31.7	1.14	15.2	Newark b†.....	51	5	30.1	2.74	11.0
Genoa.....	46	-11	20.1	1.36	7.0	Clover Valley						New Brunswick*.....	58	3	29.6	2.51	12.7
Gering*.....	62	-20	23.4	0.19	1.9	Cranes Ranch						New Brunswick*.....	58	2	28.6	2.32	14.5
Gothenburg	60	-11	23.0	0.44		Darragh Ranch						Newton	55	2	26.0	2.10	8.0
Grand Island a*.....	62	-6	26.6	0.67	4.2	Downeyville	62	12	38.4	0.40	2.0	Ocean City	51	3	31.1	2.70	7.3
Grand Island b.....	54	-10	23.2	0.70	6.2	Duckwater	47	5	27.2	0.21	3.8	Oceanic	56	8	31.8	3.14	18.6
Greeley.....	53	-12	21.0	0.58	5.0	Elko*.....	46	-1	27.9	0.58	5.8	Paterson	53	4	30.4	3.46	11.0
Haigler*.....	68	-10	23.6	T.	T.	Elko (near)	49	-7	26.4	0.28	3.5	Perth Amboy*.....	51	4	26.8	1.98	10.0
Hartington †.....	45	-19	18.7	2.50	28.0	Ely	55	-9	25.8	1.20	12.0	Plainfield	56	3	28.8	2.70	12.8
Harvard*.....	50	-10	22.6	1.35	18.5	Empire Ranch	49	-15	25.0	1.11	12.0	Rancocas					
Hastings*.....	50	-6	24.5	0.29	1.0	Fenelon*.....	48	0	23.6	0.85	8.5	Readington*.....	54	6	31.7		
Hay Springs.....	58	-18	19.4	2.45	24.5	Goleonda*.....	48	20	31.1	0.44	2.0	Rivervale	54	4	29.2	3.87	15.0
Hebron †.....	51	-8	25.4	0.65	4.2	Hawthorne a*.....	54	28	36.8	0.70	8.4	Sergeantsville	54	4	27.6	2.66	14.0
Hickman.....						Hawthorne b.....	56	14	36.2	0.17	1.0	Somerville	56	-2	27.7	3.08	14.3
Holdredge*.....	56	-13	26.1	0.70	2.5	Hot Springs*.....	55	10	33.7	T.		South Orange	54	4	28.2	3.63	12.5
Imperial a†.....	60	-18	24.4	0.50	5.0	Humboldt*.....	50	12	33.5	0.86	2.5	Staffordville					
Indianaola (near)*.....	59	-16	24.4	0.80	5.0	Keyser Springs						Toms River	60	-3	29.2	3.21	16.0
Kennedy.....	61	-17	19.2	1.00	10.0	Lewers Ranch	53	11	33.4	2.18	11.5	Trenton	62	5	32.8	2.06	12.0
Kimball*.....	63	-24	24.7	0.20	3.0	Lovelock*.....	65	16	35.2	0.44	5.0	Vineland	61	1	30.4	2.28	7.0
Kirkwood*.....	50	-15	15.4	0.90	9.0	Midas	53	18	32.2	1.88	9.5	Woodbine	60	4	28.3	2.03	9.0
Lexington*.....	66	-14	25.6	0.20	3.0	Mill City*.....	57	10	30.5	0.40	1.0	<i>New Mexico.</i>					
Lincoln d†.....	51	-8	23.1	0.46	4.4	Osceola	56	9	32.6	1.88	21.0	Albert*.....	54	2	31.4	0.45	4.5
Lincoln d.....	46	-8	21.5	0.68	3.8	Palisade*.....	50	5	33.6	0.71	6.5	Albuquerque*.....	53	2	31.4	0.57	3.2
Lodgepole*.....	64	-22	28.0	0.15	1.5	Palmetto	59	-4	30.2	8.20	32.0	Angus V. V. Ranch	50	2	28.0	2.30	20.5
Loup a*.....	52	-10	24.2	0.29	3.0	Reese River						Aztec*.....	50	5	27.2	1.31	6.5
Loup b*.....	62	-12	23.2	0.42		Reno*.....	47	12	31.8			Bernalillo*.....	58	5	29.9		</td

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
New Mexico—Cont'd.	0	0	0	Ins.	Ins.	New York—Cont'd.	0	0	0	Ins.	Ins.	North Dakota—Cont'd.	0	0	0	Ins.	Ins.
Lower Penasco †	59	-8	33.1	1.40	14.0	Straits Corners	54	-4	22.2	1.31	13.5	University †	37	-30	-0.7	0.65	4.5
Monero †	43	-13	20.8	1.37	13.5	Wappingers Falls	54	-12	26.0	2.77	17.0	Valley City †	33	-27	-1.0	0.90	9.0
Ocate †	50	-11	21.4	0.65	6.5	Warwick	50	-16	20.4	1.13	..	Wahpeton †	36	-29	3.6	0.43	4.2
Puerto de Luna †	58	-9	31.0	1.70	17.0	Watertown	50	-16	20.4	2.46	..	White Earth	36	-33	4.9	T.	T.
Raton †	75	4	33.3	0.20	2.0	Waverly †	58	-1	24.2	1.72	8.8	Wind rice ‡	35	-34	2.2	0.76	5.3
Rincon †	62	15	39.4	1.23	5.0	Wedgewood	55	-3	21.5	1.85	13.5	Willow City †	35	-32	1.0	T.	T.
Roswell †	62	-4	31.7	1.12	8.0	Westfield	61	0	24.8	1.93	18.0	Woodbridge	36	-32	-0.2	0.69	6.9
San Marcial †	61	-4	34.8	0.58	4.5	Westpoint †	51	5	26.2	3.05	14.5	Ohio.					
Shattucks Ranch	76	0	34.8	1.23	11.0	Willetts point	58	-7	28.4	3.54	8.4	Akron	60	-14	21.4	1.92	18.8
Socorro †	63	-9	32.2	0.51	3.0	North Carolina.						Annapolis	62	-17	24.6	..	..
Springer †	45	-11	19.2	0.50	5.0	Asheville †	56	-2	30.9	1.78	3.1	Ashland	60	-15	22.8	2.38	20.1
Valley Ranch	57	-7	23.0	0.50	5.0	Beaufort †	70	15	44.8	1.91	..	Ashatabula	61	-8	24.8	5.05	36.0
White Oaks †	50	8	29.4	2.32	16.5	Biltmore †	50	-2	33.6	1.77	1.6	Atwater					
Winsors Ranch				1.85	14.0	Fairbluff †						Bangorville	60	-20	23.2	2.53	16.0
New York.						Falkland						Basil	61	-20	25.2	1.71	3.0
Adams						Fayetteville †	70	10	30.6	1.81	..	Bellevfontaine	61	-20	25.2	2.72	4.5
Addison	50	-5	24.0	1.54	8.0	Greensboro †	65	6	37.9	2.15	..	Binola	61	-15	23.0	3.45	27.5
Akron						Henderson †	67	8	35.9	2.25	6.0	Bisells	59	-18	22.2	2.18	30.8
Angelica †	56	-20	19.2	3.18	20.0	Highlands	56	-10	30.6	5.04	5.2	Bladensburg	66	-17	24.7	1.57	5.8
Appleton	59	1	24.8	1.42	14.8	Horse Cove †	54	-5	34.1	4.78	4.0	Bloomingburg	67	-14	26.6	1.92	4.0
Arcade	55	-7	20.1	2.70	18.5	Jacksonville †	71	2	2.24	..		Bowling Green	60	-20	22.8	1.88	14.5
Atlanta						Lenoir †	58	0	35.4	2.88	6.0	Cambridge	63	-13	25.6	1.96	10.9
Avon	60	-8	23.4	1.97	..	Linville †	50	-7	27.8	3.98	12.0	Camp Dennison	66	-9	28.4	2.51	6.5
Baldwinsville	59	-3	22.4	5.40	44.5	Littleton †	67	8	35.0	1.25	2.8	Canal Dover	63	-21	24.2	2.14	14.5
Bedford	54	4	27.8	8.92	16.2	Louisburg †	67	8	36.4	2.06	5.0	Canfield					
Big Sandy ¹⁰	60	-11	20.0	..		Lynn † ²	65	..	34.8	3.29	1.8	Canton †	63	-13	25.5	2.09	13.5
Binghamton †	55	-2	23.7	1.45	8.5	Marion	65	1	37.8	3.26	7.0	Carrollton	62	-17	23.2	2.66	15.0
Bolivar	59	-16	19.8	2.31	1.55	Mocksville	66	4	38.2	2.42	6.2	Cedarville					
Boys Corners				4.07		Moncreuf †	70	12	38.8	1.46	4.0	Celina	63	-16	28.0	0.67	6.3
Brentwood	57	0	28.2	4.40	19.7	Morganton [†]	65	7	38.5	2.27	1.0	Cherry fork	69	-13	27.0	2.60	11.0
Brooklyn	51	6	28.8	4.14	23.0	Mountany †	63	5	32.5	3.40	7.6	Circleville	70	-11	29.8	1.37	3.0
Canajoharie	51	-7	23.0	0.68	10.5	Mount Pleasant	63	1	33.2	2.57	1.2	Clarksville	64	-12	26.2	3.00	4.6
Carmel	54	8	25.7	3.45	13.0	Murphy †	68	6	37.3	2.62	3.5	Cleveland a.	61	-14	25.2	1.97	12.0
Catskill	51	1	25.6	2.68	13.5	New bern †	74	16	40.8	1.74	..	Cleveland b.	61	-15	24.0	1.58	13.2
Charlotte ¹⁰	60	2	25.1	..		Panego †	64	0	34.4	1.87	7.0	Clifton	63	-14	25.6	2.25	7.6
Cherry Creek				4.06		Pittsboro †	67	7	35.4	1.63	5.0	Coalton	66	-10	29.2	1.60	5.0
Cooperstown †	55	-6	21.0	1.72	12.5	Rockingham †	68	10	41.0	1.40	2.0	Dayton a.	59	-18	23.3	1.74	14.0
Cortland	53	-6	21.4	3.06	4.0	Roxborot †	65	4	38.8	2.27	6.0	Dayton b.	65	-12	27.7	2.07	9.9
De Kalb Junction				2.47		Salem †	65	8	34.7	2.99	6.5	Defiance	61	-18	22.7	2.47	10.2
Dewster				4.96		Sallsbury †	64	7	38.0	2.71	2.5	Delaware †	61	-13	26.7	1.44	4.0
Eagle Mills				0.60		Saxon †	66	0	33.4	1.75	9.0	Demos	61	-12	24.0	0.75	6.5
Easton				3.51		Seima	69	12	38.5	2.20	4.0	Dupont	62	-18	22.9	8.11	19.5
Elmira †	58	1	24.7	1.40	..	Settle	62	-2	32.8	2.23	6.9	Elyria	61	-16	24.1	1.47	7.7
Fleming	59	0	24.0	1.90	16.0	Skyuka	66	-4	37.1	4.31	T.	Fairport Harbor ¹⁰	63	-8	27.0	..	
Fort Niagara †	60	-1	25.0	0.98	10.0	Sloant †	70	13	42.1	1.81	0.1	Fayetteville	64	-13	27.1	2.59	8.6
Franklinville	56	-21	19.0	2.54	26.5	Soapstone Mount †						Findlay	60	-19	25.7	2.30	17.8
Friendship	59	-17	20.6	2.29	15.4	Southern Pines a †	71	10	41.1	1.39	1.5	Fostoria	60	-20	23.5	3.60	14.0
Fulton				4.41		Southern Pines b †	69	10	39.8	1.68	2.5	Frankfort	65	-10	27.6	1.59	3.0
Garrattsville	56	-6	22.5	3.15	13.5	Southport †	67	13	44.2	2.07	9.9	Garrettsville †	60	-16	22.6	2.62	18.4
Glens Falls	52	-10	20.8	2.87	16.5	Springhope [†]	66	11	36.5	1.90	3.0	Granville	68	-13	25.8	1.96	6.5
Gloversville	49	-11	20.2	2.48	23.4	Tarboro	69	7	37.8	1.93	1.0	Gratiot	63	-12	25.4	1.25	7.6
Haskinsville				1.58		Wash Woods †						Greenfield	62	-9	26.6	1.81	3.0
Honeyhead Brook	55	1	24.4	2.38	7.1	Waynesville †	57	-12	39.0	2.98	4.6	Greenhill	61	-18	22.9	1.45	13.4
Humphrey †	54	-3	21.6	3.03	26.5	Weldon †	67	10	39.0	2.25	2.5	Greenville	61	-15	24.2	1.86	5.2
Ithaca	55	-6	23.7	1.50	11.7	Willeyton	69	10	37.0	1.84	4.0	Hackney	68	-6	29.6	2.55	4.5
Jamestown	57	-7	23.4	4.23	32.5	North Dakota.						Hanging Rock	61	-21	23.3	3.05	16.2
King Station				2.20		Amenia	58	-81	1.4	0.70	7.0	Hedges	61	-15	22.8	3.05	..
Lake George	53	-14	21.7	2.19	16.5	Ashley	56	-80	5.0	0.75	7.5	Hillhouse	61	-15	22.8	2.62	26.5
Lebanon Springs	56	-9	22.6	2.99	21.2	Buxton	57	-80	0.8	1.25	9.9	Hillshordt	60	-13	23.2	1.88	5.0
Little Falls	55	-12	18.4	1.01	..	Churchs Ferry	55	-36	-0.2	1.70	7.0	Hiram	59	-19	21.4	2.00	18.0
Lockport	54	-2	25.8	1.87	17.5	Coalharbor †	40	-30	2.1	0.82	6.2	Hudson	60	-20	22.6	3.51	20.5
Lowville				2.72		Devils Lake	48	-34	7.0	0.34	3.4	Jacksonboro	64	-13	25.9	2.60	14.0
Lyons	60	2	24.8	2.27	14.5	Falconer	58	-31	8.4	1.50	15.0	Kenton †	58	-18	24.4	2.38	10.2
Madison Barracks †	59	-21	19.4	1.29	14.8	Fargo †	35	-33	-0.8	0.36	0.8	Killbuck	63	-19	23.5	2.12	14.0
Manhattan Beach †	48	4	27.2	2.82	16.0	Forman †	41	-28	4.8	2.04	21.0	Lancaster	63	-11	25.9	1.89	3.5
Mohonk Lake	51	0	23.2	1.89	12.0	Fort Berthold	51	-31	11.0	1.87	18.7	Leipsic	61	-21	23.2	2.39	18.5
Mount Morris				1.40		Fort Yates †	45	-38	9.2	1.10	11.0	Levering	60	-27	21.4	1.78	..
New Lisbon	55	-7	20.3	1.14	11.5	Gallatin †	38	-36	2.0	0.55	3.5	Logan	60	-12	26.3	1.39	3.8
Niagara Falls				1.87		Grafton †	38	-26	-0.6	1.60	18.0	Lordstown	61	-17	23.0	2.07	13.5
North Hammond †	54	-24	30.1	1.47	19.2	Grand Rapids †	38	-31	3.8	0.98	9.1	Lowell	62	-13	26.5	1.73	3.7
Number Four †	58	-26	17.0	8.16	31.1	Hamilton	38	-32	-1.4	2.04	13.4	McArthur	66	-13	26.9	1.75	5.0
Ogdensburg	62	-26	19.7	1.65	18.0	Jamestown †	40	-26	6.0	1.10	11.0	McConnellsburg †					

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>Ohio—Cont'd.</i>						<i>Oregon—Cont'd.</i>						<i>Pennsylvania—Cont'd.</i>					
North Lewisburg	61	-17	24.2	2.14	11.0	Junction City ^{*8}	68	26	48.3	2.60	.....	Point Pleasant	61	0	0	Ins.	Ins.
North Royalton	60	-18	23.5	2.34	11.0	Lafayette ^{*8}	58	25	39.5	1.95	2.5	Pottstown	60	4	28.0	2.90	14.0
Norwalk	61	-22	23.6	1.80	11.0	Lakeview [†]	50	9	31.6	1.18	8.5	Quakertown	57	2	26.4	3.01	13.0
Oberlin	60 ^c	-18	21.9 ^c	1.94	14.5	Langlois	61	31	49.2	5.20	.....	Reading [‡]	27.4	1.69	11.0	1.75
Ohio State University	64	-12	25.2	1.00	3.0	McMinnville [†]	55	26	38.4	3.83	4.5	Renovo	63	-5	25.2	2.01	9.1
Orangeville	59	-20	23.1	1.84	20.0	Merlin ^{*8}	62	26	37.0	2.15	1.0	Ridgway [†]	61	-25	21.3	1.72	12.6
Ottawa	61	-18	25.4	3.38	14.6	Monmouth ^{*8}	58	23	39.5	2.87	9.2	Saegeerstown	55	-9	21.8	1.89	7.5
Pataskala [†]	63	-13	25.8	1.80	7.1	Mount Angel [†]	58	23	39.0	2.88	3.0	St. Marys	53	-2	28.5	1.93	18.2
Perry	68	-18	24.6	2.67	28.0	Nehalem	.....	.....	.....	10.43	2.5	Salem Corners	53	0	25.7	1.48	6.0
Philo	68	-18	24.6	1.04	3.5	Newberg	59	22	39.3	3.84	2.0	Scranton	58	-1	27.6	2.28	1.0
Plattsburg	62	-14	25.4	2.41	11.0	Newport	57	17	44.0	4.99	.....	Seishoitzville	56	-1	27.6	1.88	11.5
Pomeroy	64	-8	28.6	1.52	4.4	Pendleton	67	9	52.1	1.88	11.1	Selinsgrove	56	3	29.0	2.94	12.4
Portsmouth ^b	70	-6	31.3	2.75	5.8	Prineville	68	10	34.6	1.20	3.9	Shawmont	50	-16	22.0	2.43	10.2
Richwood	59	-21	23.7	1.37	3.0	Riddles ^{*8}	60	33	41.5	1.36	0.5	Shinglehouse	60	-1	28.0	2.00	12.8
Ridgeville Corners	63	-10	25.6	2.42	6.7	Salem [†]	58	24	39.8	2.79	1.0	Sinnamahoning	60	-16	21.9	1.60	7.5
Ripley	63	-18	23.8	1.84	13.5	Sheridan ^{*8}	57	25	40.1	4.17	2.5	Skippack	57	1	28.0	2.07	12.8
Rittman	60	-18	23.8	0.95	5.8	Silver Lake	49	0	28.8	0.25	2.0	Smithport	53	1	28.0	2.14	12.8
Rockyridge	60	-19	23.0	1.10	7.0	Silverton ^{*8}	56	20	37.9	4.07	1.1	Smiths Corners	50	-12	19.6	3.01	18.5
Rosewood	62	-15	24.5	1.10	7.0	Siskiyou ^{*8}	52	35	37.4	.....	10.0	South Bethlehem	58	3	29.0	2.00	12.8
Sharon Center	61	-5	26.8	1.68	15.5	Sparta	47	7	25.9	2.04	20.0	State College	57	3	26.5	1.89	6.5
Shenandoah	60	-21	22.6	1.70	10.1	Springfield ^{*8}	58	24	39.8	2.32	2.0	Sunbury	59	-5	23.0	2.21	8.0
Sidney ^b	62	-14	24.2	2.05	9.8	Stafford	58	20	37.4	4.05	8.0	Towanda	58	6	28.6	2.99	10.5
Sinking Spring ^t	64	-10	28.2	2.33	6.0	The Dalles [†]	65	9	35.6	1.14	8.8	Unontown	68	-6	28.0	1.81	6.5
Springboro	64	-10	28.2	1.75	3.0	Toledo	59	21	44.7	5.13	.....	Warren [†]	59	-13	23.2	2.27	12.8
Spring Valley	64	-18	24.6	2.17	4.0	Vale	46	2	28.5	1.78	7.0	West Chester	64	-8	24.1	2.33	8.5
Strongsville	60	-14	23.2	1.79	8.0	Venmonia	55	15	37.6	3.48	4.0	West Newton [†]	58	6	28.6	2.99	10.5
Sylvania	59	-19	21.8	2.91	16.5	West Fork ^{*8}	56	30	41.8	1.68	.....	Westtown	57	4	26.8	2.64	9.8
Thurman	69	-10	29.6	1.16	6.0	Williams	59	25	38.7	1.46	.....	White Haven	54	-4	24.2	1.80	9.8
Tiffin [†]	61	-16	24.9	2.65	19.5	<i>Pennsylvania.</i>	60	1	31.0	0.95	.....	Willsbarret	61	3	29.1	1.40	6.0
Upper Sandusky	60	-15	24.3	2.15	17.8	Altoona	60	0	29.0	1.50	7.8	Williamsport	60	0	25.8	1.45	7.5
Urbanah	61	-14	24.2	1.70	8.9	Aqueduct	63	-5	23.2	.....	York [†]	62	1	27.9	1.55	11.5	
Vanceburg	69	-7	30.4	1.98	2.8	Caledon	60	1	31.0	0.95	<i>Rhode Island.</i>	54	5	27.6	2.76	16.0	
Van Wert	60	-19	22.2	2.19	12.0	Bethlehem	64	4	27.8	1.53	.....	Bristol	54	1	26.4	5.19	19.5
Vermilion	61	-17	23.7	3.51	27.0	Brookville [†]	52	-5	23.2	.....	Kingston	54	1	26.4	4.94	18.0	
Vickery	63	-16	24.4	2.00	13.1	Browns Lock	.....	.....	.....	2.35	13.0	Lonsdale	53	4	30.2	5.45	14.8
Walnut	.....	.....	.....	1.68	5.4	Cameron	64	10	34.2	3.18	20.5	Prov. Fucket	56	6	28.2	6.24	20.0
Warren	60	-14	23.2	2.58	18.4	Canonsburg	74	8	27.6	1.53	4.8	Providence a	54	3	28.2	5.16	19.5
Warsaw	60	-18	25.4	0.67	5.2	Carlisle	64	4	27.8	1.77	9.8	Providence c	54	3	26.8	3.72	19.5
Wauseon	58	-21	23.8	3.76	18.5	Cedarrun	56	-10	34.2	3.18	20.5	<i>South Carolina.</i>	60	6	27.4	3.45	.....
Waverly	64	-10	28.5	1.70	3.4	Dubois	58	-6	36.0	1.54	9.8	Anderson [†]	69	11	48.8	3.85	T.
Waynesville	61	-14	24.8	2.51	8.0	Dunmore	58	-6	36.0	1.54	9.8	Batesburg [†]	70	12	48.8	3.53	.....
Wellington	58	-17	24.8	0.82	7.0	Dyberry [†]	54	-5	23.2	.....	Camden [†]	63	5	38.6	1.97	T.	
Westerville	64	-10	27.2	1.77	5.9	East Bloomsburg	56	-5	33.6	1.48	11.2	Central [†]	63	1	26.4	5.19	19.5
Wiloughby	60	-18	23.5	2.55	26.5	East Mauch Chunk	58	1	26.6	2.96	9.2	Cheraw a [†]	70	9	39.6	0.97	0.3
Wooster ^a	61	-18	23.6	8.42	20.5	Edison [†]	54	-5	23.2	.....	Cheraw b [†]	61	3	39.6	1.39	2.0	
Wooster ^b	61	-18	23.6	1.98	14.2	Fayette [†]	52	-12	31.9	.....	Clemson College	66	5	38.8	2.72	2.0	
Youngstown	56	-15	23.8	0.76	3.9	Ellwood Junction [†]	58	3	29.8	2.62	8.8	Conway [†]	60	1	27.9	2.09	12.8
<i>Oklahoma.</i>						Emporia	59	-18	24.0	2.30	9.2	Darlington (near)	61	1	27.9	1.85	1.99
Anadarko [†]	77	1	38.0	0.60	10.0	Farrandsville	54	1	31.0	1.89	.....	Edisto [†]	61	1	27.9	1.99	1.99
Arapaho [†]	57	3	31.0	1.56	7.4	Forks of Neshaminy ^{*1}	54	8	26.4	3.39	15.5	Evingham [†]	71	9	40.6	1.74	1.64
Beaver [†]	48	-6	25.9	1.55	16.3	Franklin	60	-12	20.2	1.95	13.9	Florence [†]	69	15	44.2	1.80	1.80
Burnett [†]	57	1	38.7	1.75	6.5	Frederick	.....	.....	Georgetown [†]	73	10	46.2	1.27	1.27			
Clifton [†]	66	-2	33.0	1.19	5.0	Gifford	52	-12	31.9	.....	Gillisonville [†]	68	6	37.4	3.45	.....
Edmond	63	1	32.0	0.86	4.0	Gettysburg	64	3	28.8	2.30	9.2	Greenville [†]	66	5	38.6	4.26	0.1
Fort Reno [†]	62	2	33.4	1.00	6.0	Girardville	58	-10	21.0	2.15	14.0	Greenwood	66	5	39.6	4.80	0.1
Fort Sill	64	5	35.1	1.50	4.4	Grampian	58	-15	25.7	1.86	7.0	Holland	66	5	39.6	4.80	0.1
Guthrie [†]	65	0	35.7	1.06	2.5	Greensboro [†]	57	-2	24.6	2.46	19.6	Holand	66	5	39.6	4.80	0.1
Hennessey [†]	59	6	36.6	0.58	3.0	Hallstead [†]	57	-2	24.6	2.46	19.6	Kingtree a [†]	73	11	42.8	2.16	2.16
Mangum [†]	70	6	36.6	1.82	8.5	Hamburg	59	2	28.4	2.50	7.5	Kingtree b [†]	68	12	42.8	2.16	2.16
Norman [†]	63	8	35.0	1.22	8.0	Hollidaysburg	59	-7	25.8	2.40	10.8	Little Mountain	72	9	48.5	3.43	T.
Ponca	55	-2	36.6	0.91	7.0	Huntingdon [†]	60	-4	27.0	1.64	9.8	Longshore [†]	68	10	40.8	3.26	T.
Pondcreek [†]	72	-5	38.6 ^e	1.65	8.7	Huntingdon b	58	-10	21.0	2.15	9.6	Mount Carmel [†]	69	17	45.0	2.00	T.
Prudencet	61 ^d	-5	38.6 ^e	1.65	8.7	Indiana	67	-9	26.8	2.56	7.8	Pinopolis ^{*1}	67	18	47.4	1.24	T.
Sac and Fox Agency [†]	68	0	38.6	1.40	6.0	Lakeview	61	4	27.5	2.26	9.6	Port Royal [†]	70	14	44.4	1.96	T.
Stillwater [†]	64	3	34.0	0.81	0.5	Lebanon	61	4	27.5	2.13	11.1	St. George [†]	68	13	48.4	1.77	T.
Waumoku [†]	60	1	38.0	0.78	5.5	Lewisburg	60	-1	26.5	3.26	11.5	St. Matthews [†]	68	12	45.2	2.75	T.
Winniewiew [†]	59	0	39.2	1.56	7.9	Lock Haven a [†]	61	-2	27.6	1.67	9.0	Santuck [†]	68	9	38.8	2.70	T.
Woodward	59	23	41.1	3.19	4.2	Lock Haven b	61	-2</									

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>South Dakota—Cont'd.</i>	°	°	°	Ins.	Ins.	<i>Texas—Cont'd.</i>	°	°	°	Ins.	Ins.	<i>Utah—Cont'd.</i>	°	°	°	Ins.	Ins.
Farmingdale	88	-29	6.6	0.36	2.0	Brownwood * ¹	76	6	44.3	1.10	8.0	Soldier Summit †	41	-10	18.2	1.83	18.2
Faulkton †	41	-30	7.8	1.79	15.0	Burnet * ¹	72	8	48.1	.....	.....	Terrace * ²	49	0	21.1	9.2	9.2
Flandreau †	41	-27	9.2	2.16	21.6	Camp Eagle Pass †	80	20	51.0	0.35	.....	Thistle † * ³	45	-6	24.2	1.65	16.6
Forestburg †	37	-27	11.5	1.50	15.0	Childress * ¹	65	8	38.6	.....	.....	Tooele †	53	8	29.6	1.15	.....
Forest City †	47	-27	11.5	1.50	15.0	Coleman * ³	88	8	38.8	1.54	11.0	Vernal	40	-9	20.6	0.96	12.0
Fort Meade †	15	.....	1.83	10.8	College Station	88	14	46.6	3.85	.....	Woodruff	42	-20	12.8	0.20	2.0	
Gary †	41	-28	8.2	1.05	16.5	Colmesneil	.....	.....	.....	.....	.....	Vermont.	.....	.....	.....	.....	.....
Goudyville *†	39	-30	7.9	1.80	18.0	Columbiat †	77	20	50.2	5.53	2.0	Bennington	55	-9	21.2	2.01	12.5
Greenwood †	49	-16	16.6	1.12	6.8	Corsicana *†	72	7	42.4	4.17	1.0	Brattleboro	49	-4	23.8	2.93	24.0
Hatch City †	48	-25	12.7	1.11	3.3	Cruer †	73	18	51.7	2.06	.....	Burlington †	57	-15	20.2	2.50	19.0
Hot Springs	55	-19	21.4	0.58	7.5	Dallas †	72	8	40.9	3.29	5.2	Cheesea †	52	-19	16.8	3.55	27.0
Howard †	37	-29	8.4	.....	.....	Danevang †	75	19	50.2	4.44	.....	Cornwall	54	-16	19.2	2.22	17.8
Kimball †	42	-24	11.0	1.80	18.0	Dean	57	-6	28.6	3.05	20.5	Enosburg Falls	58	-22	16.8	3.45	29.0
Leslie †	53	-25	16.0	0.50	.....	Dublin †	72	5	39.4	1.80	5.0	Hardland †	51	-16	19.4	3.30	25.4
McEllette †	38	-29	6.9	2.62	26.2	Durham	.....	.....	.....	.....	.....	Jacksonville	50	-16	19.6	3.78	26.8
Menns †	41	-28	11.6	1.30	10.3	Duval *†	78	15	48.6	1.17	.....	Norwich	51	-15	18.5	3.90	22.5
Millbank	43	-25	6.4	1.10	8.0	Estelle †	70	6	39.8	4.66	18.5	St. Johnsbury	42	-18	15.6	2.15	16.2
Mitchell †	40	-28	10.0	2.10	18.5	Forestburg †	70	8	39.5	1.27	3.0	Strafford *†	46	-12	17.8	3.15	27.5
Nowlin †	60	-23	14.7	1.15	11.5	Fort Clark	74	14	47.8	1.78	.....	Vernon *†	50	-7	22.8	3.71	27.0
Oelrichs †	68	-18	20.4	1.75	17.5	Fort McIntosh	75	21	48.8	1.10	3.8	Wells	56	-15	19.6	3.41	27.0
Parker †	41	-27	9.1	0.80	6.0	Fort Ringgold †	81	23	52.6	1.83	.....	Woodstock	52	-21	19.2	3.76	28.6
Plankinton †	24	.....	1.89	19.0	Fort Stockton	.....	.....	.....	.....	.....	<i>Virginia.</i>	.....	.....	.....	.....	.....
Rosebud	60	-20	14.8	2.30	23.0	Fort Worth †	69	10 ⁴	40.84	3.14	13.3	Alexandria	66	7	30.4	1.83	5.7
St. Lawrence †	40	-27	7.4	1.45	25.0	Fredericksburg *†	73	13	52.71	1.66	.....	Ashland †	70	2	34.8	1.52	5.0
Shilo	40	-30	7.2	.....	.....	Gainesville *†	68	7	39.4	3.84	9.2	Barbourville	64	1	30.4	1.76	7.3
Silver City	38	-27	8.0	2.10	21.0	Georgetown *†	72	11	42.0	.....	.....	Bogstone Gap †	67	-15	31.0	3.11	5.1
Sioux Falls †	38	-27	22.1	2.25	10.8	Gollindo	.....	.....	.....	.....	.....	Birdsnest *†	60	16	36.8	1.80	1.4
Spearfish †	53	-17	24.2	0.95	1.3	Graham	60	0	37.2	1.31	6.7	Blacksburg	63	3	39.2	1.05	6.8
Tyndall †	45	-20	15.0	1.60	16.0	Grapevine	69	9	40.5	2.90	12.0	Buckingham †	65	5	30.2	0.92	0.2
Vermillion	45	-28	12.7	0.85	8.5	Hale Center †	60	7	35.9	1.20	12.0	Burkes Garden	52	9	26.0	1.16	7.0
Watertown †	50	-35	6.4	1.00	9.0	Hallettsville †	77	17	49.2	2.61	1.5	Callaville †	67	7	34.8	1.95	3.0
Webster †	37	-28	5.1	5.69	28.6	Hewitt	.....	.....	.....	.....	.....	Charlottesville	64	5	38.4	2.02	6.0
Wentworth †	39	-30	6.5	1.45	14.2	Houston †	76	19	49.6	5.93	1.0	Christiansburg †	64	5	30.7	1.59	5.0
<i>Tennessee.</i>	.....	.....	.....	.....	Huntsville †	72	14	44.8	4.55	.....	Clifton Forge	53	7	26.7	2.35	7.5	
Andersonville *†	67	-4	34.6	1.75	2.5	Kent	.....	.....	.....	.....	.....	Dale Enterprise	60	3	28.8	1.56	7.0
Ashwood *†	68	-2	27.7	3.95	1.3	Kerrville †	73	12	42.8	0.64	2.1	Dowell	68	3	32.4	3.15	3.8
Bayne *†	65	-7	34.2	2.03	1.5	Lampasas †	71	11	43.8	2.18	1.5	Fredericksburg †	68	4	31.8	1.70	6.0
Benton (near) †	69	-9	38.2	1.96	3.0	Liano *†	72	16	45.2	0.98	.....	Gordonville	65	0	32.4	1.65	7.8
Bluff City †	.....	.....	.....	.....	Longview †	73	12	45.3	5.19	.....	Goshen	59	4	33.0	9.0	9.0	
Bolivar †	69	0	36.8	3.28	0.5	Luling †	76	17	49.5	1.37	.....	Grahams Forge	58	-4	27.5	1.80	6.6
Bristol †	65	-15	30.9	2.17	2.3	Mann	10	.....	.....	.....	.....	Guinea	68	5	30.4	3.60	6.5
Byrdstown	69	-8	33.6	3.79	4.0	Menardville †	75	7	40.0	0.58	2.0	Hampton	68	14	38.1	1.87	3.0
Cagle *†	68	-1	31.9	2.96	3.0	Moore Station	80	19	48.7	1.22	2.2	Hot Springs	51	-3	27.8	2.15	4.5
Cartage †	.....	.....	.....	.....	Mount Blanco †	64	2	32.0	1.03	10.0	Lexington †	66	-1	31.8	1.76	6.7	
Charleston †	66	13	35.0	4.67	2.0	New Braunfels †	74	17	47.8	1.56	.....	Maidens	68	5	32.0	1.65	4.2
Charlotte	66	-13	35.0	4.67	2.0	Orange †	68	18	45.2	6.80	.....	Manassast	66	7	30.8	5.00	5.5
Clarksville	66	-2	34.6	4.37	3.0	Panter †	.....	.....	.....	.....	.....	Marion *†	57	4	30.3	2.40	8.0
Clinton †	66	-9	36.2	3.98	2.5	Paris †	75	8	41.5	3.34	4.0	Monterey	50	0	26.6	1.83	7.0
Decatur †	70	-9	36.2	2.98	2.5	Point Isabel *†	78	28	58.6	0.70	.....	Nottoway †	69	0	34.7	2.30	5.7
Elizabethton	68	-12	35.5	2.81	18.0	Rheinland †	68	0	37.8	1.49	4.5	Petersburg †	70	4	35.8	1.96	6.8
Eik Valley *†	68	-10	34.8	3.48	3.0	Robby †	2	.....	.....	.....	.....	Quantico	62	-4	30.0	1.62	6.2
Fairmount	67	1	34.4	3.84	2.5	Rocksprings	.....	.....	.....	.....	.....	Radford †	67	0	27.1	1.13	7.0
Florence †	67	-6	36.4	3.43	1.8	Runge †	79	14	50.6	0.76	.....	Richmond (near) †	69	5	36.8	1.90	4.7
Franklin	67	-3	35.0	3.27	1.5	San Antonio	75	18	49.7	1.59	.....	Rocky mount †	64	4	35.6	2.21	6.5
Greenville †	61	-8	34.0	2.42	3.9	Sanderson †	75	12	41.6	0.18	0.9	Salem †	63	3	36.0	1.69	5.9
Harriman	68	-4	35.0	3.23	2.0	San Marcos †	84	16	47.8	1.61	.....	Smithville †	65	6	34.6	1.87	7.5
Hohenwald †	69	-9	35.5	3.78	1.0	Sierra Blanca †	73	9	41.8	0.15	1.5	Spears Ferry †	68	9	34.0	2.28	3.0
Jackson †	69	-3	36.5	4.20	.....	Stafford †	78	18	49.0	4.98	.....	Spotsylvania	68	5	30.2	1.88	7.5
Johnsonville †	69	-8	36.6	3.71	0.5	Sulphur Springs †	71	11	42.8	4.56	1.2	Stanleyton	64	5	30.7	2.00	4.0
Jonesboro *†	58	-14	32.7	2.13	7.4	Tulie	54	-7	27.6	1.76	17.0	Stanton †	60	2	31.9	0.92	6.5
Kington †	66	-10	35.2	3.50	3.0	Waco †	72	18	44.2	2.57	.....	Stephens City †	60	3	26.5	1.85	7.0
Liberty †	66	-10	35.2	4.04	2.0	Weatherford †	69	9	40.4	3.08	7.5	Sunbeam †	67	12	34.4	2.22	3.7
Loudon †	66	1	34.4	3.19	3.0	Wichita Falls †	.....	.....	.....	.....	.....	Westbrook Farm	65	4	38.4	2.87	5.0
Lynville *†	69	2	34.4	2.71	1.5	<i>Utah.</i>	.....	.....	.....	.....	.....	Williamsburg	68	5	30.9	1.46	6.0
McKenzie †	66	4	36.8	4.85	1.0	Alpine City †	60	0	25.7	1.38	9.5	Wytheville	59	-2	20.5	1.43	7.8
McMinnville †	66	-9	36.1	4.35	4.5	Blue Creek *†	60	0	25.7	2.24	.....	Ashford †	54	0	34.0	5.93	5.8
Molino †	65	-1	37.0	3.43	3.1	Brigham City †	60	6	30.4	0.80	2.0	Blaine †	54	10	34.0	4.54	3.0
Newport †	68	-9	35.0	2.67	5.0	Cisco †	55	-4	28.1	1.70	17.0	Bridgeport	50	8	29.2	1.05	8.0
Nunnally *†	66	-10	36.1	3.50	2.4	Corinne *†	50	-4	28.1	2.35	.....	Centerville †	55	-6	29.0	1.05	8.0
Palmetto †	68	-3	37.8	2.71	2.5	Farmington	.....	.....	.....	.....	.....	Chehalist	53	18	34.7	8.27	3.0
Pope *†	68	-8	36.1														

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	
Washington—Cont'd.	0	0	0	In.	In.	Wisconsin—Cont'd.	0	0	0	In.	In.	Kansas—Cont'd.	0	0	0	In.	In.	
Olga	54	25	40.9	2.75	4.0	Lancaster†	60	-27	14.2	1.87	12.0	Hays	68	18	44.4	0.90	0.90	
Olympia†	56	10	39.4	5.81	1.5	Lincoln‡	.....	.....	20.0	2.04	8.0	Oswego	76	16	43.9	1.17	1.17
Pine Hill†	66	0	24.8	2.16	16.0	Madison†	54	-28	17.6	2.22	0.6	Missouri.	.....	.....	.....	.....	.....
Pomeroy†	54	-1	38.0	1.70	2.8	Manitowoc†	50	-18	20.8	2.26	0.6	Hastain	.....	.....	.....	1.00	1.00
Pullman†	49	-11	28.9	2.12	18.5	Meadow Valley†	58	-26	14.0	1.61	1.8	Macomb	.....	.....	.....	1.10	1.10
Rosalia†	46	1	28.8	1.84	5.0	Medford†	53	-23	12.0	1.02	2.6	Potosi	61	0	38.0	.....	.....
Sedro†	58	18	39.8	4.91	3.0	Menasha	.....	.....	.....	0.30	0.2	Nebraska.	.....	.....	.....	.....	.....
Silvercreek ¹	52	20	37.6	4.64	5.0	Neillsville†	54	-27	18.0	1.95	.....	Sargent	.....	.....	.....	T.	T.
Suquamish†	57	17	38.8	3.40	8.0	New Holstein	51	-20	15.5	3.46	6.0	Nerada.	.....	.....	.....	.....	.....
Southbend	58	24	41.0	9.48	0.5	New London	53	-23	17.6	1.81	1.5	Tuscarora	47	11	32.9	0.43	0.5	
Stillaguamish	56	13	37.2	3.87	7.0	Oconto	49	-19	19.4	1.82	1.5	New Jersey.	.....	.....	.....	.....	.....
Sunnyside†	53	8	30.8	0.83	6.8	Osecola†	48	-28	7.6	2.50	13.0	Beachhaven ¹	56	23	36.9	1.06	6.0	
Tacoma†	59	16	37.7	6.92	8.0	Oshkosh†	53	-23	18.0	0.19	2.0	New Mexico.	.....	.....	.....	.....	.....
Union City†	56	17	38.2	9.56	5.2	Pepin	54	-26	11.3	1.84	8.0	Angus V. V. Ranch.	62	14	36.7	0.33	5.0	
Vashon†	56	19	39.3	6.47	5.0	Pine River†	53	-25	17.6	1.66	2.2	North Carolina.	.....	.....	.....	.....	.....
Waterville†	45	-15	20.2	2.94	16.5	Portage†	53	-23	15.6	1.43	2.0	Morganton	.....	.....	.....	2.23	2.23
West Virginia.	.....	.....	.....	.....	.....	Port Washington	52	-21	21.2	3.83	0.4	North Dakota.	.....	.....	.....	.....	.....
Beckley	64	-18	27.8	1.25	3.5	Prairie du Chien	66	-23	20.2	2.78	9.2	St. John	47	-30	19.0	0.00	0.0	
Beverly†	62	-12	27.6	2.85	17.0	Racine	50	-19	22.1	8.26	8.0	Oregon.	.....	.....	.....	.....	.....
Bloomery†	58	-3	26.2	1.37	7.5	Sharon†	57	.....	.....	4.11	18.0	South Dakota.	52	12	37.9	7.17	7.0
Bluefield†	62	-4	30.4	1.78	9.1	Shawano	51	-20	19.4	1.76	2.5	Canton	46	2	27.4	0.24	0.24	
Buckhannon†	.....	.....	.....	1.79	15.5	Spoonert	46	-24	7.8	2.10	21.0	Millbank	47	-16	21.6	.....	.....
Burlington†	64	1	27.8	1.21	2.5	Stevens Point†	52	-25	16.2	1.51	6.5	Rosebud	60	-10	34.3	0.85	8.5	
Charleston†	.....	.....	.....	2.08	3.0	Sturgeon Bay Canal ²	48	-20	20.0	.....	.....	Sihiol	50	-26	19.6	T.	.....
Dayton†	.....	.....	.....	1.85	3.0	Valley Junction†	59	-26	14.9	1.47	2.0	Texas.	.....	.....	.....	.....	.....
Elkhorn†	62	-1	33.5	1.46	5.2	Viroqua	55	-26	14.8	2.60	5.2	Henrietta	76	19	47.3	1.87	1.87	
Fairmont†	.....	.....	.....	1.94	7.0	Watertown†	56	-23	18.8	4.08	26.5	Vermont.	.....	.....	.....	.....	.....
Glenville†	66	-12	27.8	1.58	1.5	Waukesha†	56	-20	20.0	2.73	4.7	Brattleboro	48	-7	24.8	0.83	4.2	
Grafton†	66	-10	27.4	2.21	8.8	Waupaca†	51	-24	17.8	1.08	0.8	Wyoming.	.....	.....	.....	.....	.....
Green Sulphur	63	-4	30.3	1.10	6.0	Wausau†	45	-27	15.0	1.88	5.5	Wheatland	60	0	32.8	0.00	0.00	
Harpers Ferry†	.....	.....	.....	1.44	6.0	Wausaukee	48	-29	16.2	2.10	2.0	.....	.....	.....	.....	.....	.....
Hewett†	68	-5	28.8	1.80	7.0	Westhend	54	-14	21.4	8.08	4.8	.....	.....	.....	.....	.....	.....
Hinton†	61	0	30.3	1.55	7.0	Westfield†	58	-23	16.0	1.22	2.7	.....	.....	.....	.....	.....	.....
Hinton ³	61	0	30.3	.....	4.5	Whitehall	55	-26	12.6	1.65	4.0	.....	.....	.....	.....	.....	.....
Kingwood	62	-9	26.0	1.92	.....	White Mound†	60	-23	17.2	2.15	6.0	.....	.....	.....	.....	.....	.....
Marlinton†	57	-8	25.1	2.17	10.0	Wyoming.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Martinsburg†	63	3	26.7	1.05	5.0	Big Horn Ranch	58	-25	21.8	0.14	3.0	.....	.....	.....	.....	.....	.....
Monarch ⁴	68	0	33.0	1.76	8.0	Fort Laraway†	62	-23	23.9	0.20	4.5	.....	.....	.....	.....	.....	.....
Morgantown†	67	-10	29.6	2.35	.....	Fort Washakie†	56	-18	16.1	0.12	1.2	.....	.....	.....	.....	.....	.....
New Martinsville†	67	-8	33.6	1.48	4.5	Fort Yellowstone†	40	-20	15.8	1.12	11.2	.....	.....	.....	.....	.....	.....
Nuttallburg†	63	-11	29.4	1.50	.....	Laramie	48	-30	16.4	0.39	.....	.....	.....	.....	.....	.....
Oldfields†	61	1	27.6	1.15	3.9	Lusk†	56	-23	19.4	0.59	4.0	.....	.....	.....	.....	.....	.....
Pennsboro	67	-15	29.6	1.88	6.5	Sheridan	57	-32	18.4	0.40	4.0	.....	.....	.....	.....	.....	.....
Philip†	65	-14	29.7	2.09	6.0	Sundance	45	-27	16.9	2.00	20.0	.....	.....	.....	.....	.....	.....
Point Pleasant†	69	6	29.8	1.89	1.0	Wheatland	58	-21	25.2	0.30	3.0	.....	.....	.....	.....	.....	.....
Romney	62	3	29.6	1.37	5.0	Mexico.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rowlesburg†	.....	.....	.....	2.30	14.5	Ciudad P. Diaz	75	23	48.6	0.36	.....	.....	.....	.....	.....	.....	.....
Tannery ⁵	60	-2	27.3	.....	12.8	Leon de Aldanas	77	34	57.0	0.50	.....	.....	.....	.....	.....	.....	.....
Weston†	60	-11	29.0	.....	7.0	Mexico.	74	37	56.5	0.16	.....	.....	.....	.....	.....	.....	.....
Weston ⁶	66	-11	29.0	.....	5.5	Topolobampo ⁷	79	55	67.8	0.20	.....	.....	.....	.....	.....	.....	.....
Wheeling†	65	-4	29.2	1.31	7.5	New Brunswick.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wheeling†	54	-21	29.6	1.31	6.0	St. John	51	-13	18.9	5.54	27.4	.....	.....	.....	.....	.....	.....
White Sulphur Springs†	58	-11	29.6	0.90	6.0	West Indies.	.....	.....	.....	0.80	.....	.....	.....	.....	.....	.....	.....
Wisconsin.	.....	.....	.....	.....	.....	Grand Turk Island	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amherst	49	-28	16.0	1.61	0.1	Alaska.	0	0	0	In.	In.	.....	.....	.....	.....	.....	.....
Apollonia ⁸	47	-33	11.6	1.60	6.0	Juneau	43	23	38.8	10.50	18.2	.....	.....	.....	.....	.....	.....
Barren	48	-33	11.4	2.03	15.5	Arkansas.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bayfield	42	-25	12.4	2.00	20.0	Helena b.	69	22	44.6	0.64	.....	.....	.....	.....	.....	.....	.....
Beloit	58	-23	19.2	1.30	10.8	Hot Springs a.	.....	.....	.....	0.64	.....	.....	.....	.....	.....	.....	.....
Boscobel†	60	-26	15.4	2.14	19.4	California.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butternut	59	-31	18.0	1.25	11.2	Hydesville	65	32	48.6	8.22	.....	.....	.....	.....	.....	.....	.....
Centralia	53	-26	15.2	0.93	2.0	Placerville	63	26	45.2	4.47	.....	.....	.....	.....	.....	.....	.....
Chilton	54	-21	19.3	0.82	0.2	Point George L. H.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Citypoint.	53	-28	12.2	1.79	3.5	Southeast Farallone	.....	.....	.....	4.19	.....	.....	.....	.....	.....	.....	.....
Crandon†	35	-20	10.2	1.39	13.0	Tulare c.	84	29	50.4	0.46	.....	.....	.....	.....	.....	.....	.....
Delavan†	53	-26	20.0	2.38	7.8	Colorado.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dodgeville†	54	-29	14.8	2.29	7.5	Sherwood Ranch	54	1	28.4	3.0	Connecticut.
Easton†	55	-24	14.2	1.45	4.4	Waterbury	54	-8	29.2	2.39	19.0	.....	.....	.....	.....	.....	.....
Eau Claire	54	-30	11.8	2.00	9.0	West Simsbury	.....	.....	.....	1.54	8.5	.....	.....	.....	.....	.....	.....
Florence†	42	-27	14.3	1.73	8.0	Marietta	69	18	43.3	1.45	5.0	Georgia.
Fond du Lac	54	-21	19.3	1.66	1.4	Illinois.	68	6	35.6	0.67	T.	Rushville
Grand River Lock	1.57	8.0	Kansas.	62	19	37.9	0.26	Delphos ⁹
Grantsburg†	43	-36	7.4	1.85	13.5
Gratot†	60	-24	18.9	2.30	8.5
Hartford	.....	.....	.....</												

TABLE III.—*Data from Canadian stations for the month of January, 1897.*

Stations.	Pressure.			Temperature.		Precipitation.		Prevailing direction of wind.	Total depth of snow.
	Mean not re- duced.	Mean reduced.	Departure from normal.	Mean.	Departure from normal.	Total.	Departure from normal.		
St. Johns, N. F.	Inches.	Inches.	Inches.	°	°	Inches	Inches.	s.	74.0
Sydney, C. B. I.	29.69	29.84	.00	24.8	+ 1.2	11.98	— 1.18	n.w.	14.0
Grindstone, G. St. L.	29.88	29.94	+ .04	22.8	+ 3.3	3.68	.....	.....	.....
Halifax, N. S.	29.86	30.00	+ .04	23.0	+ 2.0	5.89	+ 0.20	n.w.	24.8
Grand Manan, N. B.	29.92	29.98	— .01	23.2	.....	3.76	— 1.61	w.	11.6
Yarmouth, N. S.	29.90	29.98	— .04	25.5	0.0	6.76	+ 1.54	n.w.	44.8
St. Andrews, N. B.	29.90	29.94	.....	19.0	+ 0.9	3.43	+ 0.18	n.w.	22.0
Charlottet' n, P. E. I.	29.94	29.94	— .02	18.3	+ 2.3	2.56	+ 0.85	w.	18.0
Chatham, N. B.	29.94	29.96	— .06	11.6	+ 5.6	3.68	+ 0.37	w.	21.1
Father Point, Que.	29.93	29.96	— .06	10.6	+ 4.6	4.39	+ 1.69	w.	27.1
Quebec, Que.	29.88	30.02	+ .04	12.1	+ 5.1	3.05	— 0.63	ne.	16.2
Montreal, Que.	29.82	30.05	— .03	13.8	+ 8.8	3.03	— 0.28	w.	26.1
Rockliffe, Ont.	29.50	30.05	— .01	9.6	+ 6.1	2.20	+ 0.19	n.w.	12.4
Kingston, Ont.	29.72	30.06	— .03	18.1	+ 3.1	2.49	+ 0.77	ne.	12.0
Toronto, Ont.	29.67	30.05	— .01	22.0	+ 3.0	1.92	— 0.59	sw.	11.2
White River, Ont.	28.63	30.10	— .00	1.3	+ 5.2	1.76	+ 0.45	n.	17.2
Port Stanley, Ont.	29.44	30.12	+ .02	21.3	.....	2.88	+ 0.15	w.	19.6
Saugeen, Ont.	29.30	30.06	— .00	21.2	+ 2.7	5.74	+ 2.28	se.	47.2
Parry Sound, Ont.	29.30	30.04	— .04	16.5	+ 5.0	4.77	+ 1.63	se.	29.1
Port Arthur, Ont.	29.28	30.04	— .06	5.8	+ 5.3	1.43	— 0.63	w.	8.6
Winnipeg, Man.	29.24	30.18	— .03	3.0	+ 8.0	0.89	+ 0.28	w.	8.7
Minnedosa, Man.	28.19	30.17	+ .01	— 2.4	+ 9.1	1.70	+ 1.07	n.w.	15.4
Qu'Appelle, Assin.	27.74	30.30	+ .04	1.0	+ 9.0	0.46	+ 0.08	n.w.	4.6
Medicine Hat, Assin.	27.74	30.21	+ .03	9.7	+ 8.2	0.74	+ 0.41	s.	7.4
Swift Curr't, Assin.	27.45	30.23	+ .04	8.6	+ 10.6	0.57	— 0.04	w.	5.7
Calgary, Alberta.	26.40	30.15	— .08	12.4	+ 8.9	0.58	— 0.04	w.	5.3
Prince Albert, Sask. ....	.....	.....	— 0.6	.....	.....	1.56	.....	sw.	15.6
Edmonton, Alberta.	27.70	30.22	+ .09	6.0	+ 4.8	0.10	— 0.63	w.	1.0
Battleford, Sask.	28.35	30.25	.....	— 1.4	.....	0.06	.....	n.w.	0.6
Kamloops, B. C.	28.93	30.23	.....	26.4	.....	0.64	.....	s.	5.4
Hamilton, Bermuda. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Banff, Alberta.	25.32	30.21	.....	11.6	.....	1.44	.....	sw.	18.6
Esquimalt, B. C.	30.08	30.06	.....	38.4	.....	5.98	.....	n.	14.0
Ottawa, Ont.	29.71	30.10	.....	12.2	.....	1.98	.....	w.	15.5

TABLE IV not received in time.

TABLE V.—*Mean temperature for each hour of seventy-fifth meridian time, January, 1897.*

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.
Bismarck, N. Dak.	4.2	8.8	2.7	2.4	2.5	2.5	2.5	2.5	3.1	2.4	3.4	5.0	6.4	8.0	9.5	9.9	9.9	9.5	8.2	6.9	5.8	5.1	4.5	4.4	5.9
Boston, Mass.	26.5	26.5	26.2	25.8	25.7	26.0	26.4	27.6	28.8	30.3	32.0	33.1	33.7	33.4	32.6	31.7	30.9	29.9	29.0	28.2	27.7	26.9	26.7	26.8	
Buffalo, N. Y.	23.7	23.8	23.0	23.2	23.1	23.8	23.2	23.7	23.8	24.9	26.3	27.2	27.1	27.6	27.5	26.1	25.4	25.5	24.7	24.3	24.1	23.8	23.5	23.0	
Chicago, Ill.	22.0	21.1	21.2	20.8	20.6	20.8	20.0	20.1	19.9	20.4	21.3	22.2	22.5	24.0	24.1	24.2	23.8	23.4	23.1	22.6	22.6	22.4	22.0	22.1	
Cincinnati, Ohio	27.8	27.5	26.9	26.4	26.0	26.4	25.0	25.2	25.7	27.1	28.9	29.9	31.1	32.0	32.7	32.9	32.6	31.7	31.0	30.0	29.8	28.6	27.8	26.6	
Cleveland, Ohio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Detroit, Mich.	21.9	21.7	21.5	21.3	21.3	20.9	20.7	21.0	20.6	21.8	23.0	24.1	24.8	25.8	25.9	25.5	24.8	24.2	23.9	23.1	22.8	22.2	21.6	20.9	20.9
Dodge City, Kans.	23.9	23.6	23.3	23.1	23.0	23.5	23.4	23.5	23.4	23.8	23.2	23.8	23.6	23.4	23.6	23.5	23.1	23.0	22.8	22.2	21.9	21.6	21.3	21.1	21.0
Eastport, Me.	19.8	19.5	19.1	18.8	18.8	18.9	18.8	18.7	19.3	20.1	21.1	21.1	21.1	21.1	21.1	21.1	20.7	20.7	20.6	20.5	21.6	21.2	20.8	21.1	21.0
Galveston, Tex.	51.2	50.7	50.5	49.9	49.8	48.7	48.3	47.9	47.8	48.1	48.7	50.1	51.3	53.2	53.0	53.4	53.0	52.3	52.0	51.8	51.8	50.9	50.7	50.7	50.7
Havre, Mont.	11.5	11.6	11.8	11.0	10.6	10.6	10.1	8.5	8.0	8.0	10.6	13.7	16.0	18.0	18.8	19.3	18.9	17.2	15.3	18.8	18.8	12.9	12.4	13.0	13.0
Kansas City, Mo.	26.4	25.1	24.1	23.5	23.0	23.8	23.7	23.5	23.5	23.5	23.5	23.7	23.7	23.7	23.7	23.7	23.6	23.6	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Key West, Fla.	66.6	66.5	66.5	66.2	66.1	66.0	65.8	65.9	66.6	67.2	68.1	68.6	68.8	69.0	68.8	68.5	67.8	67.5	67.0	67.0	66.9	66.9	67.3	67.3	67.3
Memphis, Tenn.	40.0	39.4	38.8	38.0	37.8	36.2	34.8	35.7	36.1	37.2	38.8	40.4	41.4	42.4	43.3	43.9	44.3	43.1	43.8	41.7	41.1	40.5	39.9	39.6	39.6
New Orleans, La.	49.8	49.3	49.1	48.6	48.0	47.4	47.3	48.4	49.8	50.8	51.8	52.7	53.4	54.1	54.2	53.7	53.1	51.5	50.6	49.9	49.6	50.5	49.6	49.6	49.6
New York, N. Y.	27.8	28.0	27.2	27.1	27.1	26.9	26.5	26.5	27.1	28.2	29.9	30.5	31.4	31.9	32.7	32.6	31.4	30.5	29.9	29.4	28.8	28.5	28.2	27.8	29.0
Philadelphia, Pa.	30.2	29.7	29.7	29.1	28.8	27.8	27.4	27.8	28.3	29.6	30.9	32.0	33.1	33.5	33.6	33.4	33.1	32.4	31.9	31.1	30.5	29.9	29.4	30.6	30.6
Pittsburg, Pa.*	20.4	19.6	19.4	18.8	18.2	18.0	18.8	18.4	18.7	19.8	21.6	22.6	23.4	24.9	25.1	25.5	25.2	25.4	25.8	25.2	21.5	19.9	21.9	21.9	21.9
Portland, Oreg.	38.6	38.5	37.6	37.5	36.9	36.9	36.6	36.7	36.6	36.0	36.1	36.3	36.9	37.8	38.0	38.9	40.9	41.3	41.2	40.5	39.4	39.3	38.9	38.3	38.3
St. Louis, Mo.	29.8	29.4	28.8	28.5	28.3	27.7	27.6	27.5	28.1	28.7	29.7	31.1	31.8	32.8	33.4	33.8	33.5	31.8	31.3	30.8	30.2	29.8	29.5	30.7	30.7
St. Paul, Minn.	8.8	8.2	7.7	7.4	6.8	6.0	5.6	5.5	5.3	5.7	6.6	6.5	10.7	12.0	13.6	14.2	14.5	14.1	13.4	12.9	12.0	10.9	9.9	9.4	9.6
Salt Lake City, Utah	36.3	26.4	25.7	25.5	25.5	25.6	25.2	24.8	24.7	25.6	27.2	29.7	31.2	31.9	32.7	34.7	34.6	34.6	31.7	30.3	29.3	28.1	27.1	26.6	26.6
San Diego, Cal.	59.8	52.5	52.0	51.4	51.2	50.6	50.2	50.8	51.9	55.3	58.5	60.1	61.6	62.3	62.8	61.7	60.5	59.1	57.8	55.9	54.7	53.7	53.7	53.3	53.3
San Francisco, Cal.	47.9	47.4	47.0	46.8	46.6	46.5	45.9	45.7	45.5	45.2	45.9	46.7	48.2	49.1	50.2	51.1	51.8	52.0	51.1	49.6	49.0	48.5	48.1	48.2	48.2
Savannah, Ga.	45.1	44.8	44.1	43.5	42.6	42.5	42.2	42.8	44.4	47.8	50.4	52.5	54.2	55.2	55.7	56.7	58.1	58.4	49.4	48.4	47.6	46.5	45.7	45.7	45.7
Washington, D. C.	29.4	28.3	27.4	26.8	26.5	26.0	25.6	25.9	27.0	28.7	31.3	33.2	34.5	35.9	36.7	36.7	36.1	34.7	33.1	31.9	31.0	30.5	29.8	29.5	29.7

*Record for last 171 days only.

TABLE VI.—*Mean pressure for each hour of seventy-fifth meridian time, January, 1897.*

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.	
Bismarck, N. Dak.	28.302	301	302	301	295	285	276	269	271	288	296	296	296	296	296	296	296	296	296	296	296	296	296	296	296	
Boston, Mass.	29.908	908	893	887	892	908	915	918	915	899	874	856	861	868	868	868	868	868	868	868	868	868	868	868	868	
Buffalo, N. Y.	29.207	209	215	212	207	209	218	226	221	235	221	199	194	195	200	204	215	223	224	221	211	211	214	211	211	
Chicago, Ill.	29.180	180	191	189	181	178	187	190	213	223	224	210	190	177	160	185	189	192	193	201	200	197	191	194	194	194
Cincinnati, Ohio	29.484	488	490	489	487	485	494	501	516	523	530	477	468	466	466	474	483	486	486	493	493	493	493	493	493	
Cleveland, Ohio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Detroit, Mich.	29.275	278	285	284	276	274	277	286	295	297	297	284	266	260	264	266	266	261	261	260	267	269	261	261	261	261
Dodge City, Kans.	27.482	488	484	492	495	493	494	495	498	505	515	514	501	490	480	482	485	487	487	487	487	487	487	487	487	487
Eastport, Me.	29.870	876	875	873	885	808	008	819	927	925	905	887	873	871	875	876	883	884	891	887	879	872	869	866	866	
Galveston, Tex.	30.181	178	178	178	177	175	182	189	200	218	224	197	165	144	138	138	136	136	136	132	132	128	128	128	128	128
Havre, Mont.	27.415	.414	.411	.406	.419	.417	.413	.406	.417	.426	.437	.444	.445	.433	.415	.408	.410	.411	.411	.409	.412	.413	.415	.418	.....	.....
Kansas City, Mo.	29.121	120	126	131	128	125	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
Key West, Fla.	30.184	126	118	115	110	114	129	148	164	176	169	150	137	107	101	108	105	115	126	137	144	149	149	149	149	149
Memphis, Tenn.	29.756	756	762	766	761	758	768	774	789	805	815	808	788	766	743	742	746	750	753	765	768	778	769	768	768	768
New Orleans, La.	30.147	145	142	140	138	139	149	161	178	191	194	185	181	178	115	116	116	122	128	134	143	150	158	163	163	147
New York, N. Y.	29.748	.747	.743	.738	.730	.723	.748	.756	.770	.776	.765	.760	.768	.735	.743	.748	.757	.764	.768	.770	.767	.763	.767	.767	.768	.....
Philadelphia, Pa.	29.991	.997	.000	.996	.999	.012	.020	.008	.043	.016	.026	.021	.026	.026	.027	.020	.015	.016	.014	.015	.015	.016	.009	.001	.001	.....

TABLE VII.—Average wind movement for each hour of seventy-fifth meridian time, January, 1897.

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.	
Abilene, Tex.	7.3	7.3	7.0	6.6	7.4	7.3	7.8	7.5	7.5	7.6	8.0	8.8	9.5	9.6	10.3	10.4	10.1	9.4	7.7	7.8	6.9	6.9	6.7	8.1	
Albany, N. Y.	6.7	7.8	7.5	7.5	7.7	7.6	7.5	7.9	8.4	9.8	10.5	10.7	11.4	10.9	11.2	11.4	10.5	9.3	9.1	8.9	8.2	7.5	7.3	6.6	8.8
Alpena, Mich.	9.4	9.5	10.0	9.9	10.0	9.7	9.3	10.4	10.0	9.8	10.1	10.7	10.9	10.6	10.0	10.6	8.9	8.6	9.1	9.8	9.5	9.6	9.8	10.0	9.8
Amarillo, Tex.	15.8	14.8	15.2	15.0	15.0	14.7	13.5	13.9	13.2	14.1	14.5	15.6	16.0	15.5	15.1	15.6	15.1	14.3	13.3	12.9	12.7	13.3	13.8	14.0	14.4
Atlanta, Ga.	11.9	11.6	11.3	11.8	11.8	11.6	11.8	11.5	11.1	11.0	12.5	12.5	12.6	12.0	13.0	13.2	12.9	12.0	11.6	11.5	11.4	11.7	12.6	12.4	13.0
Atlantic City, N. J.	12.8	12.6	12.8	12.9	12.4	12.3	11.7	12.4	13.3	13.8	14.5	14.8	14.4	15.0	14.5	14.4	13.7	11.3	11.4	11.8	11.7	11.6	12.4	12.1	12.9
Augusta, Ga.	6.8	5.4	5.9	5.7	6.1	5.8	5.8	6.0	6.2	7.0	7.7	8.0	8.6	8.7	9.1	9.4	9.4	8.3	7.7	7.6	7.0	6.9	6.6	6.6	7.2
Baker City, Oreg.	4.5	5.0	4.6	4.0	4.1	5.3	5.2	4.9	5.2	5.0	4.7	5.5	5.9	5.5	5.6	5.6	5.5	6.0	5.4	4.5	4.5	4.4	4.1	4.8	4.0
Baltimore, Md.	5.1	5.3	4.9	5.8	5.3	5.6	5.8	5.9	6.1	6.6	7.1	7.6	7.5	7.6	7.7	7.0	7.0	6.5	6.0	5.6	5.5	5.0	5.3	5.4	6.1
Bismarck, N. Dak.	10.9	11.5	10.2	9.5	9.6	10.4	9.4	9.7	9.5	9.6	9.9	11.3	12.4	12.2	12.8	13.5	12.5	11.8	10.5	9.9	9.4	10.4	10.7		
Block Island, R. I.	19.6	19.0	18.8	18.8	18.6	18.8	19.3	19.3	19.4	18.8	18.2	17.9	18.0	18.1	18.3	17.9	17.2	17.5	18.1	18.1	18.4	19.0	19.5	19.8	18.6
Boston, Mass.	12.4	13.0	13.0	12.7	13.1	13.0	12.9	12.4	13.8	13.9	13.8	14.0	13.7	14.0	14.6	13.7	13.7	12.3	12.6	12.9	13.3	13.2	12.9	12.7	13.2
Buffalo, N. Y.	18.8	18.7	18.1	18.6	18.4	18.3	18.6	19.4	18.5	18.8	19.8	20.8	19.1	19.5	20.4	21.1	21.4	19.8	20.0	19.2	19.3	18.0	19.2	18.0	19.2
Cairo, Ill.	9.8	10.4	10.0	9.5	9.9	10.2	10.3	10.0	10.8	10.9	11.4	10.8	11.1	11.5	11.2	10.9	10.7	10.5	9.5	10.1	10.6	10.8	10.5	10.1	10.4
Cape Henry, Va.	14.0	14.3	14.0	13.9	14.3	13.2	13.2	14.2	14.1	14.4	13.5	13.0	13.1	13.1	11.6	11.8	12.9	13.0	13.5	14.8	14.5	13.4	14.5	13.4	
Charleston, S. C.	8.8	8.2	8.1	8.3	8.1	8.3	8.1	7.8	8.1	8.5	8.4	8.5	9.6	9.6	10.2	9.9	9.2	8.1	7.7	7.9	8.0	8.8	9.1	9.0	8.6
Charlotte, N. C.	6.0	5.8	8.2	5.7	6.0	5.9	5.7	5.8	6.0	6.9	7.0	7.4	7.6	7.7	8.0	7.6	7.0	6.2	6.9	7.0	7.0	6.9	6.6	6.6	6.6
Chattanooga, Tenn.	8.0	7.8	7.8	7.1	7.6	7.6	7.8	8.2	8.2	8.9	9.7	9.6	10.1	10.7	11.0	11.2	10.6	10.5	9.5	9.1	8.2	7.1	7.5	7.5	8.8
Cheyenne, Wyo.	9.7	9.7	9.6	10.5	11.1	10.6	10.8	10.2	10.9	11.0	12.1	12.1	14.1	15.6	16.4	15.9	14.6	13.3	10.9	10.0	9.4	9.1	9.8	11.7	
Chicago, Ill.	18.7	19.4	19.4	18.3	18.5	18.5	17.9	18.1	18.6	18.2	17.5	17.7	18.8	18.3	18.7	19.0	19.9	19.5	19.3	19.3	19.6	18.8	18.5	18.1	18.7
Cincinnati, Ohio	8.8	8.7	9.0	8.8	8.2	8.6	8.3	8.9	8.9	9.0	10.0	10.5	10.9	11.3	11.4	11.4	11.5	10.6	10.3	9.5	9.7	9.6	9.4	9.1	9.7
Cleveland, Ohio	16.9	17.2	17.3	16.9	16.1	15.6	15.8	16.4	16.5	17.2	17.7	18.1	17.7	17.5	17.5	17.3	16.8	16.8	17.3	17.8	18.7	18.8	17.8	17.0	17.2
Columbia, Mo.	9.9	9.7	9.7	9.9	9.9	9.8	9.2	9.5	9.8	10.9	11.4	11.2	11.5	12.5	12.6	12.5	12.6	10.9	10.3	10.0	10.5	10.8	10.9	10.1	10.6
Columbus, Ohio	8.6	8.2	8.1	7.9	8.1	7.9	7.9	8.2	8.2	9.1	9.8	10.1	10.7	10.4	10.4	10.8	10.2	9.3	9.3	9.4	9.1	9.0	8.9	8.8	9.1
Concordia, Kans.	7.1	7.1	6.8	7.2	7.2	7.3	7.4	7.8	7.6	7.8	9.7	10.2	10.2	9.7	10.1	9.5	8.7	9.1	8.6	8.6	8.5	8.7	7.1	8.0	
Corpus Christi, Tex.	9.8	10.0	10.2	10.5	10.7	10.5	10.6	10.3	11.6	11.8	12.0	12.2	12.8	12.4	12.2	12.5	11.8	11.5	10.7	9.5	9.4	9.9	10.0	11.1	
Davenport, Iowa	10.0	9.5	9.3	8.4	8.3	8.5	8.3	8.6	8.2	9.3	10.1	10.7	10.5	10.9	11.4	11.5	11.1	10.7	10.0	9.9	10.1	9.9	9.5	9.4	9.7
Denver, Colo.	5.9	7.1	7.8	7.5	6.9	7.1	7.6	7.7	7.4	7.1	6.9	7.0	6.5	6.2	6.0	7.0	7.2	7.2	7.8	8.5	7.9	6.7	6.5	6.5	7.1
Des Moines, Iowa	8.7	7.9	7.5	7.8	7.1	7.5	7.5	7.6	8.0	8.3	8.9	9.7	10.2	11.0	10.0	10.8	10.5	10.1	9.2	8.6	8.4	8.8	8.6	8.4	8.8
Detroit, Mich.	10.6	10.2	10.3	9.7	9.7	10.0	10.1	10.6	10.3	10.7	12.1	12.1	12.8	13.6	13.2	12.6	12.2	11.9	11.6	11.1	10.8	10.7	10.8	11.1	
Dodge City, Kans.	9.2	10.2	10.0	10.7	11.3	11.8	11.1	11.1	11.8	12.6	13.4	13.6	13.5	13.5	12.8	12.4	12.2	12.5	11.8	10.7	9.5	9.4	9.0	8.7	
Dubuque, Iowa	6.6	6.2	6.0	6.3	6.0	5.5	5.5	5.5	5.6	6.0	6.5	7.1	7.6	7.6	8.0	7.5	6.7	6.0	6.5	6.0	6.4	6.4	6.3	6.4	
Duluth, Minn.	11.6	11.6	11.8	10.7	10.7	10.5	10.2	9.8	9.6	9.0	8.7	8.5	9.9	9.6	9.5	8.6	8.7	9.5	10.3	10.0	10.8	12.0	11.5	10.6	
Eastport, Me.	18.5	14.4	14.3	14.1	14.8	15.0	14.4	14.9	15.3	15.8	15.8	15.9	15.1	14.7	14.7	14.8	13.6	14.7	15.0	14.8	13.9	13.4	14.6		
El Paso, Tex.	9.6	10.0	9.4	8.7	9.8	9.0	8.6	8.0	7.8	7.4	7.9	10.4	12.0	12.8	11.2	11.4	8.4	9.8	10.1	9.9	9.6	9.6	9.9	9.6	
Erie, Pa.	15.5	15.3	15.5	15.1	15.4	15.0	14.9	14.8	15.1	15.6	15.4	15.6	15.4	15.6	15.8	14.5	14.5	14.3	14.1	13.8	14.5	15.5	16.0	15.5	15.0
Eureka, Cal.	4.3	3.5	3.5	3.8	3.5	3.1	3.0	2.9	3.6	3.4	3.8	3.4	3.8	4.5	4.5	5.5	5.5	5.0	5.7	5.5	5.5	4.9	4.7		
Fort Canby, Wash.	16.1	16.6	16.2	16.5	16.5	17.2	17.1	17.4	17.7	17.6	15.8	15.8	15.8	14.5	14.8	16.1	16.8	16.5	16.7	17.4	17.2	17.9	16.6		
Fort Smith, Ark.	6.9	7.0	6.6	6.5	6.4	6.4	6.8	7.5	7.5	7.6	9.2	9.4	9.1	8.9	9.2	9.8	8.6	8.7	9.2	9.0	8.6	8.4	8.7		
Fresno, Cal.	4.0	4.0	4.2	3.8	3.8	4.0	3.5	3.7	3.9	3.5	3.5	3.7	3.9	4.1	4.4	4.1	4.3	4.1	3.9	3.6	3.5	3.9	4.1	3.9	
Galveston, Tex.	13.8	13.5	13.2	13.6	12.9	13.4	13.8	13.8	12.9	12.5	12.8	12.8	12.8	12.1	12.5	12.3	12.5	11.7	11.7	11.5	12.1	13.1	13.3	12.7	
Grand Haven, Mich.	11.5	12.0	12.0	11.8	12.3	12.4	11.9	12.1	12.4	12.8	13.6	14.1	13.9	13.5	13.7	13.8	13.9	12.8	12.5	12.5	12.3	12.4	11.5	12.6	
Greenbay, Wis.	8.9	9.2	9.2	8.8	9.0	8.6	8.9	8.6	8.5	8.8	8.8	10.1	10.4	10.6	10.5	10.4	10.4	9.8	8.7	8.6	9.0	9.0	8.8	9.3	
Hannibal, Mo.	11.5	11.1	10.8	9.9	9.1	9.0	9.7	9.4	9.2	10.2	11.1	11.0	11.6	12.3	12.3	11.5	11.5	11.2	10.9	10.8	11.2	11.0	10.8	10.8	
Harrisburg, Pa.	9.8	10.5	10.0	10.6	10.8	10.0	10.7	10.5	10.6	11.1	10.9	11.0	11.3	11.8	12.1	12.0	11.2	10.7	10.2	9.6	9.5	10.1	10.4		
Hatteras, N. C.	16.6	16.7	16.4	16.5	16.3	16.3	15.7	15.8	15.8	15.8	15.7	15.0	15.0	15.1	14.4	14.4	14.8	14.8	14.2	14.8	14.7	14.8	15.8	15.4	
Havre, Mont.	9.2	8.7	9.3	9.5	9.3	9.5	9.2	8.1	8.0	9.7	9.8	10.4	10.6	10.5	10.5	10.4	10.4	9.8	8.4	8.2	7.2	8.3	9.0	9.0	
Helena, Mont.	5.0	4.8	5.4	4.6	5.1	5.2	4.7	4.4	4.																

TABLE VII.—Average wind movement, etc.—Continued.

Stations.	Wind Movement												Cloudiness													
	1 a.m.	2 a.m.	3 a.m.	4 a.m.	5 a.m.	6 a.m.	7 a.m.	8 a.m.	9 a.m.	10 a.m.	11 a.m.	Noon.	1 p.m.	2 p.m.	3 p.m.	4 p.m.	5 p.m.	6 p.m.	7 p.m.	8 p.m.	9 p.m.	10 p.m.	11 p.m.	Midnight.	Mean.	
Pensacola, Fla.	9.8	10.7	10.9	11.5	11.9	12.1	11.2	11.6	12.6	12.8	12.4	11.5	12.1	11.5	12.1	12.8	11.5	10.5	9.9	9.9	10.0	10.2	10.3	11.3		
Philadelphia, Pa.	10.3	10.1	10.2	10.6	10.6	10.5	10.7	11.0	11.4	11.9	12.2	13.0	12.3	12.1	12.7	11.8	11.0	11.0	11.4	10.7	11.1	11.1	10.2	11.3		
Phoenix, Ariz.	2.6	2.8	3.0	3.1	3.3	3.5	3.4	3.5	3.1	3.5	3.1	3.6	4.0	4.3	4.6	4.5	4.8	4.8	3.9	3.8	3.8	3.0	2.9	3.1	3.6	
Pierre, S. Dak.	8.6	8.5	9.2	8.9	8.9	8.7	8.8	8.0	8.3	8.2	9.3	10.4	10.7	11.4	11.6	11.1	10.9	9.7	9.8	9.7	9.2	8.7	9.5	9.5		
Pittsburg, Pa.	7.7	7.4	7.0	7.3	7.3	7.1	7.1	7.3	7.9	7.8	8.0	8.4	9.1	8.5	8.5	8.1	7.5	7.5	7.6	7.8	7.5	7.4	7.7	7.7		
Port Angeles, Wash.																										
Port Huron, Mich.	10.7	11.5	10.8	10.8	11.8	11.2	12.0	13.1	12.8	12.8	13.1	14.0	14.6	14.1	13.4	12.5	11.9	11.0	12.6	12.3	11.7	11.0	10.7	12.2		
Portland, Me.	7.0	7.4	7.6	8.0	8.4	8.8	9.0	8.0	8.1	8.9	9.0	9.5	9.6	10.0	9.7	9.4	8.2	8.3	7.8	7.6	7.6	8.0	7.5	8.5		
Portland, Oreg.	0.5	7.2	6.7	7.0	7.5	7.8	7.0	6.7	6.8	7.2	7.3	8.2	8.0	9.1	9.1	8.9	8.8	9.6	8.8	8.6	8.3	7.7	7.2	7.8		
Pueblo, Colo.	6.1	5.6	5.2	5.3	5.0	4.5	4.7	4.4	4.5	4.9	5.7	5.9	6.6	7.9	8.7	9.7	9.9	8.4	7.2	5.0	4.1	4.9	5.5	5.0	6.0	
Raleigh, N. C.	6.2	6.3	5.5	5.7	5.9	6.0	5.6	5.7	6.7	7.3	8.1	8.9	8.1	8.0	7.9	7.7	7.1	5.8	5.7	6.0	5.9	6.7	6.4	6.6	6.6	
Rapid City, S. Dak.	7.0	7.0	7.8	7.7	7.6	7.5	8.0	7.8	7.9	8.1	8.0	8.1	8.5	9.8	10.6	10.8	11.0	10.7	8.7	7.9	7.7	7.8	7.4	7.5	8.4	
Redbluff, Cal.	4.4	4.4	4.5	4.3	4.2	4.5	4.4	4.3	4.2	4.4	4.4	4.2	4.1	4.4	4.6	4.6	5.0	4.8	5.0	4.8	4.7	4.5	4.3	4.3	4.9	4.5
Rochester, N. Y.	10.4	10.2	10.1	9.7	10.8	9.4	9.5	9.6	10.2	10.6	11.1	11.6	12.1	11.5	11.3	11.0	10.5	10.6	10.8	11.0	10.5	10.1	10.0	10.5		
Roseburg, Oreg.	1.7	1.9	2.4	2.1	2.2	2.1	2.0	1.8	1.9	1.8	2.1	2.1	2.1	2.5	2.8	3.1	2.9	3.7	3.4	3.0	2.5	2.2	1.9	2.0	2.3	
Sacramento, Cal.	7.7	7.0	7.2	7.0	6.6	6.6	6.4	6.5	5.7	5.5	5.4	5.6	6.4	6.5	7.0	7.0	7.5	7.4	7.1	6.9	7.1	8.0	7.6	8.0	6.8	
St. Louis, Mo.	12.7	11.9	12.8	12.6	12.1	11.4	11.4	12.1	12.8	12.4	13.9	13.5	13.2	13.5	13.8	13.0	13.2	13.1	12.2	12.3	12.8	12.7	12.6	12.1	12.5	
St. Paul, Minn.	8.2	7.8	7.4	7.6	7.2	7.4	7.2	7.1	7.1	7.1	7.9	8.7	9.0	9.9	10.3	10.2	10.0	9.6	9.0	8.8	8.6	7.7	7.8	7.6	8.3	
Salt Lake City, Utah.	8.4	8.0	8.3	8.2	8.4	8.3	8.0	8.3	8.4	8.8	8.1	8.6	8.0	8.4	8.5	8.7	8.4	8.7	8.4	8.0	8.6	8.2	8.9	8.6	8.6	
San Antonio, Tex.	8.0	7.8	7.7	7.4	7.7	7.7	8.5	8.2	7.8	7.5	8.7	9.7	10.7	10.2	10.7	10.0	10.3	8.9	8.7	7.1	7.8	7.6	8.1	7.9	8.5	
San Diego, Cal.	4.6	4.8	4.5	4.9	4.3	4.5	4.7	4.7	8.9	4.5	4.1	3.8	3.5	4.1	4.5	5.6	6.6	7.5	8.2	7.4	5.9	4.3	3.5	3.8	4.9	
Sandusky, Ohio	9.3	9.1	9.1	8.9	9.1	8.9	8.7	9.0	9.2	9.9	9.9	11.0	10.7	11.0	11.1	10.7	10.9	9.9	9.6	10.0	9.3	9.1	9.1	9.0	9.7	
San Francisco, Calif.	6.4	6.7	5.8	5.7	5.4	5.7	5.5	5.6	5.4	5.6	6.2	6.7	7.4	7.9	7.9	8.1	7.7	7.2	7.8	7.8	7.9	7.2	6.7	6.8	6.8	
San Luis Obispo, Calif.	3.1	3.1	3.2	3.6	3.7	3.5	3.5	3.7	3.8	3.4	3.5	2.9	3.8	3.7	4.8	5.8	6.3	6.6	5.4	4.5	4.1	3.7	4.0	4.2	5.2	
Santa Fe, N. Mex.	4.7	4.9	4.6	4.6	4.0	4.7	5.2	5.4	5.4	6.4	6.6	6.9	8.1	9.0	8.7	8.4	8.8	7.6	6.8	5.1	4.5	4.2	4.9	5.2	6.0	
Sault Ste Marie, Mich.	10.2	9.9	9.3	9.0	9.5	9.3	9.6	8.8	8.5	7.9	7.7	7.2	8.0	8.5	8.7	9.0	9.6	9.5	9.4	9.8	9.5	9.3	9.6	9.0	9.0	
Savannah, Ga.	8.5	8.8	8.3	8.5	8.4	8.0	8.8	8.5	8.6	8.7	9.5	9.7	10.6	10.6	10.3	10.2	10.4	9.3	8.5	8.8	8.8	8.9	8.9	9.0	9.0	
Seattle, Wash.	4.8	5.0	4.5	4.9	4.6	4.4	4.2	3.8	4.0	4.4	4.0	4.1	4.6	4.6	4.8	5.2	5.1	5.3	4.9	5.1	5.0	5.0	4.6	4.7	4.7	
Shreveport, La.	7.8	7.6	7.1	7.1	7.4	7.1	7.1	7.8	7.5	7.6	9.2	9.7	9.6	9.5	9.8	10.5	10.2	10.1	8.4	8.2	8.5	8.0	8.2	7.9	8.4	
Sioux City, Iowa	11.8	12.2	12.0	11.3	12.1	12.6	13.1	12.1	13.1	13.9	14.1	14.8	15.7	15.5	14.6	14.6	13.9	12.2	12.1	12.4	12.8	12.3	12.1	13.0		
Spokane, Wash.	4.1	4.3	4.8	4.6	4.5	3.9	3.8	4.3	4.3	4.0	4.0	4.1	4.7	4.7	4.3	4.8	4.8	4.4	4.9	5.0	4.5	4.8	4.5	4.4	4.4	
Springfield, Ill.	11.0	10.5	11.3	11.4	11.0	10.6	10.9	10.1	10.4	11.0	12.1	12.0	11.9	11.5	11.9	11.6	11.4	11.0	10.7	10.5	11.3	11.4	11.6	10.8	11.2	
Springfield, Mo.	12.1	11.2	10.9	10.4	10.7	10.5	11.0	11.2	11.4	12.1	12.1	12.8	12.8	14.0	13.8	13.9	13.2	13.5	12.0	11.8	11.7	11.0	10.7	11.0	11.9	
Tampa, Fla.	5.3	5.1	5.5	6.1	5.7	5.0	5.4	5.7	6.1	7.2	7.9	8.0	8.5	8.1	8.5	8.7	8.5	8.6	8.5	8.6	6.1	6.0	6.3	5.5	6.6	
Tatoosh Island, Wash.	17.3	19.4	19.0	18.1	18.8	19.2	18.8	19.7	18.4	18.8	18.5	18.6	17.5	18.8	18.4	18.4	18.2	18.1	18.4	19.5	18.4	19.4	19.0	18.6		
Toledo, Ohio.	10.8	10.0	10.0	10.5	10.5	10.3	10.3	10.9	10.7	11.8	13.3	13.6	13.6	13.9	12.6	12.1	12.1	12.3	12.2	12.0	11.3	10.8	10.7	10.5	11.5	
Vicksburg, Miss.	9.2	8.7	8.5	7.9	7.8	7.3	7.0	7.4	7.5	8.2	8.9	8.7	8.5	8.7	8.9	8.8	8.5	8.5	7.9	8.2	8.3	8.5	8.5	8.2		
Vineyard Haven, Mass.	10.5	10.6	10.4	11.0	10.6	10.4	10.4	10.5	10.9	11.0	11.3	11.4	10.9	10.6	10.5	10.8	9.8	9.5	9.8	10.1	10.8	11.4	10.7	10.6		
Walla Walla, Wash.	3.4	3.5	3.1	2.9	3.4	3.1	2.7	3.4	3.6	3.2	3.6	3.8	3.7	4.0	3.8	3.2	2.8	3.2	3.0	3.1	3.5	3.3	3.8	3.7		
Washington, D. C.	7.8	7.3	7.5	7.6	7.0	7.1	6.9	7.2	7.5	8.9	9.8	9.7	10.8	11.2	11.8	11.5	10.0	8.7	8.5	7.7	7.3	7.0	6.7	8.5		
Wichita, Kans.	8.4	8.1	7.5	7.8	7.8	8.1	8.5	8.5	9.7	9.5	10.9	11.9	13.2	13.8	12.7	12.4	12.1	10.6	9.1	8.8	8.8	8.6	8.2	9.7		
Williston, N. Dak.	7.2	7.8	8.4	8.6	8.7	8.4	8.7	8.6	7.7	7.4	8.6	9.8	9.8	10.4	10.5	10.2	9.6	9.3	8.4	8.3	7.7	8.0	7.7	8.6		
Wilmington, N. C.	8.5	8.4	8.3	8.7	8.8	8.7	8.2	8.5	9.0	9.7	9.9	9.8	9.7	9.8	9.6	9.3	7.8	7.6	7.3	7.5	7.6	7.5	8.7			
Winnemucca, Nev.	6.7	7.1	7.7	7.4	7.7	8.5	8.5	9.0	8.6	8.8	8.9	8.5	8.6	9.0	8.6	8.7	8.2	6.9	6.8	6.5	6.7	8.0	7.6	6.7	7.8	
Woods Hole, Mass.	18.1	18.1	17.5	17.6	17.8	16.8	16.7	18.0	17.2	17.1	17.1	16.5	15.8	15.5	16.3	16.4	16.4	15.9	16.3	17.4	17.7	18.2	18.7	17.8	17.1	
Yuma, Ariz.	4.6	4.1	4.4	4.7	4.9	4.7	4.6	5.3	5.1	5.6	5.7	6.2	6.0	6.3	6.7	10.8	10.6	10.9	10.0	8.1	6.5	5.9	5.6	5.8	6.7	

TABLE VIII.—Resultant winds from observations at 8 a. m. and 8 p. m., daily, during the month of January, 1897.

Stations.	Component direction from—				Resultant.		Stations.	Component direction from—				Resultant.									
	N.	S.	E.	W.	Direction from—	Duration.		N.	S.	E.	W.	Direction from—	Duration.								
<i>New England.</i>																					
Eastport, Me.	26	19	10	27	n. 53 w.	23	Upper Lake Region—Cont'd.	Hours.	Hours.	Hours.	Hours.	°	Hours.								
Portland, Me.	27	17	3	23	n. 71 w.	31	Milwaukee, Wis.	15	17	8	25	s. 86 w.	27								
Northfield, Vt.	26	28	3	13	s. 79 w.	10	Greenbay, Wis.	12	26	9	26	s. 27 w.	16								
Boston, Mass.	16	17	7	35	s. 88 w.	23	Duluth, Minn.	19	15	2	39	n. 84 w.	37								
Nantucket, Mass.	29	12	8	27	n. 48 w.	23	Moorhead, Minn.	26	16	12	24	n. 50 w.	16								
Woods Hole, Mass.*	6	9	4	17	s. 77 w.	13	Bismarck, N. Dak.	28	11	14	27	n. 38 w.	22								
Block Island, R. I.	23	11	12	34	n. 61 w.	23	Williston, N. Dak.	21	16	13	24	n. 66 w.	12								
New Haven, Conn.	18	14	8	30	n. 80 w.	23	<i>Upper Mississippi Valley.</i>														
<i>Middle Atlantic States.</i>																					
Albany, N. Y.	23	18	6	25	n. 78 w.	19	St. Paul, Minn.	15	19	14	32	s. 77 w.	18								
Binghamton, N. Y.†	7	9	6	16	s. 79 w.	10	La Crosse, Wis. †	7	10	2	19	n. 80 w.	17								
New York, N. Y.	28	11	12	32	n. 59 w.	23	Davenport, Iowa	14	12	16	32	n. 83 w.	16								
Harrisburg, Pa.	17	11	17	29	n. 68 w.	18	Des Moines, Iowa	27	14	9	28	n. 56 w.	23								
Philadelphia, Pa.	33	8	15	23	n. 18 w.	26	Dubuque, Iowa	16	18	10	32	s. 88 w.	23								
Atlantic City, N. J.	24	8	15	27	n. 37 w.	20	Keokuk, Iowa	18	17	12	30	n. 87 w.	18								
Baltimore, Md.	16	9	16	31	n. 65 w.	17	Cairo, Ill.	23	20	14	21	n. 67 w.	2								
Washington, D. C.	31	11	13	18	n. 14 w.	21	Springfield, Ill.	17	20	9	31	s. 83 w.	25								
Lynchburg, Va.	19	16	17	28	n. 75 w.	11	Hannibal, Mo.	23	16	9	29	n. 71 w.	91								
Norfolk, Va.	33	9	15	17	n. 5 w.	24	St. Louis, Mo.	13	19	15	27	s. 68 w.	13								
<i>South Atlantic States.</i>																					
Charlotte, N. C.	14	16	27	18	s. 77 e.	9	<i>Missouri Valley.</i>	Columbia, Mo.*	7	10	4	17	s. 77 w.	13							
Hatteras, N. C.	37	5	14	19	n. 9 w.	22	Kansas City, Mo.	28	17	10	25	n. 54 w.	19								
Kittyhawk, N. C.	28	8	13	23	n. 27 w.	23	Springfield, Mo.	25	20	12	21	n. 61 w.	10								
Raleigh, N. C.	30	10	11	23	n. 31 w.	23	Lincoln, Neb.	31	19	9	19	n. 40 w.	16								
Wilmington, N. C.	30	10	15	23	n. 23 w.	23	Omaha, Nebr.	28	17	7	24	n. 57 w.	20								
Charleston, S. C.	29	9	17	21	n. 11 w.	20	Sioux City, Iowa†	14	9	7	11	n. 39 w.	6								
Augusta, Ga.	23	10	16	29	n. 45 w.	18	Pierre, S. Dak.	25	10	19	28	n. 18 w.	16								
Savannah, Ga.	30	9	12	27	n. 85 w.	26	Huron, S. Dak.	30	14	14	25	n. 34 w.	19								
Jacksonville, Fla.	23	18	21	24	n. 81 w.	12	<i>Northern Slope.</i>														
<i>Florida Peninsula.</i>																					
Jupiter, Fla.	24	11	17	26	n. 35 w.	16	Havre, Mont.	15	11	13	37	n. 81 w.	24								
Key West, Fla.	29	6	36	3	n. 55 e.	40	Miles City, Mont.	18	26	12	20	s. 45 w.	11								
Tampa, Fla.	33	7	21	18	n. 7 e.	25	Helena, Mont.	18	19	2	43	s. 81 w.	41								
<i>Eastern Gulf States.</i>																					
Atlanta, Ga.	23	2	20	30	n. 27 w.	22	Rapid City, S. Dak.	16	23	8	34	s. 77 w.	27								
Pensacola, Fla.	33	8	20	14	n. 18 e.	26	Cheyenne, Wyo.	30	8	5	33	n. 51 w.	35								
Mobile, Ala.	31	17	12	16	n. 18 w.	15	Lander, Wyo.	14	26	18	16	s. 8 e.	14								
Montgomery, Ala.	24	9	18	20	n. 8 w.	15	North Platte, Nebr.	23	12	7	33	n. 69 w.	28								
Vicksburg, Miss.	27	16	20	12	n. 36 e.	14	<i>Middle Slope.</i>														
New Orleans, La.	27	13	24	12	n. 41 e.	18	Denver, Colo.	19	26	16	11	s. 36 e.	9								
<i>Western Gulf States.</i>																					
Shreveport, La.	24	19	16	18	n. 23 w.	5	Pueblo, Colo.	18	14	19	21	n. 27 w.	4								
Fort Smith, Ark.	14	7	25	23	n. 23 e.	8	Concordia, Kans.	23	29	4	17	s. 63 w.	14								
Little Rock, Ark.	23	10	12	23	n. 75 w.	11	Dodge City, Kans.	24	20	7	21	n. 74 w.	15								
Corpus Christi, Tex.	33	13	17	12	n. 14 e.	13	Wichita, Kans.	23	24	7	11	n. 39 w.	6								
Galveston, Tex.	27	15	20	16	n. 18 e.	13	Oklahoma, Okla.	23	18	9	20	n. 48 w.	15								
Palestine, Tex.	30	19	14	14	n. 1 e.	23	<i>Southern Slope.</i>														
San Antonio, Tex.	36	15	16	7	n. 23 e.	23	Abilene, Tex.	25	14	14	22	s. 36 w.	14								
<i>Ohio Valley and Tennessee.</i>																					
Chattanooga, Tenn.	23	18	11	26	n. 72 w.	16	Amarillo, Tex.	22	25	4	22	s. 81 w.	18								
Knoxville, Tenn.	23	8	17	26	n. 38 w.	19	<i>Southern Plateau.</i>														
Memphis, Tenn.	18	20	18	20	n. 45 w.	3	El Paso, Tex.	20	6	16	34	n. 83 w.	28								
Nashville, Tenn.	23	20	13	26	n. 81 w.	13	Santa Fe, N. Mex.	23	16	30	8	n. 61 e.	25								
Lexington, Ky.	20	22	9	31	n. 85 w.	20	Phoenix, Ariz.	10	17	26	19	s. 45 e.	10								
Louisville, Ky.	10	27	14	25	n. 83 w.	20	Yuma, Ariz.	36	9	18	8	n. 20 e.	29								
Indianapolis, Ind.	13	17	12	30	n. 73 w.	17	<i>Middle Plateau.</i>														
Cincinnati, Ohio.	11	23	16	25	n. 37 w.	15	Carson City, Nev.	26	16	15	18	n. 17 w.	10								
Columbus, Ohio.	13	17	15	23	n. 77 w.	15	Winnemucca, Nev.	18	17	21	18	n. 72 e.	3								
Pittsburg, Pa.	5	25	14	33	n. 44 w.	28	Salt Lake City, Utah	11	19	14	31	s. 65 w.	19								
Parkersburg, W. Va.	8	24	9	28	n. 50 w.	25	<i>Northern Plateau.</i>														
<i>Upper Lake Region.</i>																					
Buffalo, N. Y.	6	19	12	33	s. 57 w.	24	Baker City, Oreg.	14	35	21	22	s. 23 e.	23								
Oswego, N. Y.	13	26	14	25	s. 40 w.	17	Idaho Falls, Idaho	40	14	7	8	n. 3 w.	26								
Rochester, N. Y.	4	24	7	41	s. 60 w.	39	Spokane, Wash.	25	12	18	16	n. 9 e.	18								
Erie, Pa.	11	28	7	29	s. 52 w.	26	Walla Walla, Wash.	8	32	9	27	s. 37 w.	30								
Cleveland, Ohio.	7	30	14	28	s. 31 w.	27	<i>North Pacific Coast Region.</i>														
Sandusky, Ohio.	6	21	9	34	s. 59 w.	29	Fort Canby, Wash.	7	23	38	4	s. 65 e.	38								
Toledo, Ohio.	7	25	18	31	s. 45 w.	26	Port Angeles, Wash.*	3	15	14	6	s. 84 e.	14								
Detroit, Mich.	10	27	13	27	s. 30 w.	20	Seattle, Wash.	18	24	25	5	s. 72 e.	20								
<i>Upper Lake Region.</i>																					
Alpena, Mich.	15	21	6	65	s. 78 w.	30	Tatoosh Island, Wash.	4	14	42	5	s. 75 e.	38								
Grand Haven, Mich.	17	17	20	23	w.	3	Portland, Oreg.	24	14	23	17	n. 31 e.	12								
Marquette, Mich.	16	20	5	34	s. 82 w.	29	Roseburg, Oreg.	23	13	21	16	n. 27 e.	11								
Port Huron, Mich.	6	30	12	28	s. 34 w.	29	<i>Middle Pacific Coast Region.</i>														
Sault Ste. Marie, Mich.	17	19	21	15	s. 72 e.	6	Eureka, Cal.	20	20	16	21	w.	5								
Chicago, Ill.	11	18	8	34	s. 76 w.	27	Redbluff, Cal.	24	19	18	22	n. 39 w.	6								
<i>South Pacific Coast Region.</i>																					
Fresno, Cal.							San Francisco, Cal.	24	10	25	19	e.	6								
Los Angeles, Cal.								33	10	17	15	n. 5 e.	23								
San Diego, Cal.								19	11	25	20	n. 23 e.	16								
San Luis Obispo, Cal.								19	17	17	17	n. 27 e.	11								
								26	20	8	19	n. 74 w.	7								
																					17

* From observations at 8 p. m. only. † From observations at 8 a. m. only.

TABLE IX.—*Thunderstorms and auroras, January, 1897.*

States.	No. of stations.																															Total.				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	No.	Days.		
Alabama.....	58	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	T.	
Arizona.....	48	T.	1	...	1	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	0	A.		
Arkansas.....	51	T.	8	14	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25	0	A.		
California.....	197	T.	...	...	...	...	...	...	...	...	2	...	2	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20	0	A.		
Colorado.....	70	T.	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	A.	
Connecticut.....	22	T.	0	0	A.
Delaware.....	6	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Dist. of Columbia	4	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Florida.....	38	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Georgia.....	49	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Idaho.....	36	T.	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	0	A.	
Illinois.....	97	T.	4	11	2	1	...	...	...	...	1	...	1	...	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22	5	A.	
Indiana.....	48	T.	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	8	A.	
Indian Territory.	6	T.	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	0	A.
Iowa.....	101	T.	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	A.
Kansas.....	73	T.	2	0	A.
Kentucky.....	47	T.	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	A.
Louisiana.....	48	T.	4	4	9	...	...	...	...	...	...	...	...	...	1	...	1	...	5	1	...	...	...	...	...	...	...	...	...	...	...	1	27	0	A.
Maine.....	16	T.	2	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	0	A.
Maryland.....	31	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	0	A.
Massachusetts....	77	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	0	A.
Michigan.....	96	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	0	A.
Minnesota.....	69	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	3	A.
Mississippi.....	52	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	0	A.
Missouri.....	96	T.	12	23	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42	6	A.
Montana.....	40	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	0	A.
Nebraska.....	112	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	0	A.
Nevada.....	30	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	A.
New Hampshire.....	23	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
New Jersey.....	54	T.	1	5	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	A.
New Mexico.....	36	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
New York.....	93	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	A.
North Carolina...	80	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	1	A.
North Dakota...	39	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Ohio.....	140	T.	3	9	2	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17	6	A.	
Oklahoma.....	20	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	A.
Oregon.....	60	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	A.
Pennsylvania.....	93	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	0	A.
Rhode Island.....	6	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
South Carolina...	42	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
South Dakota.....	46	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Tennessee.....	49	T.	2	3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	7	A.
Texas.....	91	T.	7	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	A.
Utah.....	32	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Vermont.....	18	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Virginia.....	37	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	0	A.
Washington.....	51	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
West Virginia...	37	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Wisconsin.....	58	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	A.
Wyoming.....	11	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0	A.
Sums	2,713	T.	40	64	19	5	1	0	0	1	0	1	0	1	0	3	0	8	0	0	1	7	1	4	1	1	0	0	1	27	111	...	T.			
		A.	15	52	4	1	2	1	0	1	0	1	0	1	0	3	0	8	0	0	1	7	1	4	1	1	0	0	1	27	111	...	A.			

TABLE X.—Hourly sunshine as deduced from sunshine recorders, January, 1897.

Stations.	Instrument.	Percentages for each hour of local mean time ending with the respective hour.														Monthly summary.					
		A. M.							P. M.							Instrumental record.					
		5	6	7	8	9	10	11	Noon	1	2	3	4	5	6	7	8	Actual.	Possible.	Percent of possible.	Personal estimate.
Albany, N. Y.	T.				28	28	37	41	43	47	45	41	30	20				Hours.	Hours.		
Atlanta, Ga.	T.			0	16	29	50	51	50	59	60	52	46	26	22		78.5	214.5	37	27	
Atlantic City, N. J.	T.				40	46	53	60	61	58	61	55	49	52	57		140.1	316.2	44	43	
Baltimore, Md.	T.				37	30	36	38	35	42	49	40	33	36	60		163.6	303.8	54	55	
Binghamton, N. Y.	T.				6	14	25	35	38	43	29	28	20	16	31		115.1	303.8	33	35	
Bismarck, N. Dak.	T.				31	30	37	32	33	40	49	49	49	48	0		76.9	235.5	26	25	
Boston, Mass.	T.				37	45	45	39	47	51	53	48	49	42	62		118.0	279.9	42	35	
Buffalo, N. Y.	T.				0	2	16	32	34	35	32	24	14	12			186.4	265.5	46	39	
Charleston, S. C.	T.			50	39	29	47	48	60	66	53	64	68	56	53		68.1	222.7	33	21	
Chattanooga, Tenn.	T.			0	23	31	41	59	52	52	53	53	37	24	14		178.5	316.5	54	51	
Cheyenne, Wyo.	T.				64	65	77	71	74	63	63	56	50	38	35		130.8	214.0	42	41	
Chicago, Ill.	T.				25	25	34	38	43	48	48	40	36	37	83		185.5	298.4	62	46	
Cincinnati, Ohio.	T.				34	32	28	41	44	38	34	40	47	77			113.1	205.5	33	37	
Cleveland, Ohio.	T.				11	10	15	22	30	34	24	22	10	10	31		114.0	308.8	33	37	
Columbus, Ohio †.	T.				11	10	15	22	30	34	24	22	10	10	31		57.1	295.5	19	18	
Denver, Colo.	P.				63	63	75	73	66	74	72	73	56	30	17		196.0	301.1	65	54	
Des Moines, Iowa.	T.				34	41	48	55	61	63	64	53	46	46			158.1	235.5	54	55	
Detroit, Mich.	T.				19	22	29	42	43	48	48	41	27	21	33		101.1	245.5	34	31	
Dodge City, Kans.	P.				51	58	65	65	75	74	74	72	70	64	54		206.9	306.5	68	61	
Dubuque, Iowa.	T.				17	18	28	32	38	42	43	41	37	36	54		104.3	235.5	35	39	
Eastport, Me.	P.				37	48	60	52	56	48	48	49	45	36	67		142.1	226.7	50	45	
Eureka, Cal.	T.				16	25	23	33	35	39	41	44	35	33	13		98.1	258.4	33	34	
Fresno, Cal.	T.			3	11	22	27	28	25	25	20	17	20	18	6		119.1	333.8	19	33	
Galveston, Tex.	T.			12	19	30	39	47	46	46	49	44	36	32	12		113.6	279.9	41	41	
Helena, Mont.	P.				26	26	46	46	45	48	48	42	44	34	30		168.7	301.1	56	49	
Indianapolis, Ind.	T.				36	34	46	52	60	73	74	70	50	39	71		150.7	308.8	53	49	
Kansas City, Mo.	T.				59	56	51	52	51	51	55	55	54	49	43		166.6	314.6	53	41	
Little Rock, Ark.	T.				40	45	50	60	61	59	60	52	54	49	47		208.7	316.2	66	58	
Los Angeles, Cal.	T.			40	62	67	76	73	74	71	70	73	57	45	37		188.0	306.5	45	45	
Louisville, Ky.	T.				44	39	37	47	50	56	54	43	37	42	32		112.4	286.7	39	37	
Minneapolis, Minn.	T.				24	20	36	46	51	55	46	38	33	32	38		172.8	311.8	55	49	
Nashville, Tenn.	T.				43	55	52	57	61	65	65	50	55	46	47		104.1	234.9	32	30	
New Orleans, La.	T.			12	13	15	25	26	37	45	43	44	39	36	31		162.3	293.4	54	45	
New York, N. Y.	T.				21	48	54	61	61	64	63	57	45	45	65		111.6	280.7	39	33	
Northfield, Vt.	P.				35	36	44	44	39	41	44	47	47	32	67		153.7	284.4	52	43	
Omaha, Nebr.	T.				46	49	53	53	53	55	55	55	50	45	39		161.3	301.1	54	44	
Philadelphia, Pa.	T.			50	47	45	57	62	61	58	57	50	47	49	75		201.9	318.5	63	57	
Phoenix, Ariz.	P.				58	62	65	69	66	75	74	63	66	45	44		60.5	206.4	26	26	
Pittsburg, Pa.	T.				0	3	10	20	26	31	35	30	22	17	29		161.7	289.7	56	49	
Portland, Me.	T.				6	36	54	66	71	72	73	66	53	33	67		66.6	263.1	24	29	
Portland, Oreg.	T.				6	6	19	26	30	35	34	31	22	14	0		62.8	253.1	22	29	
Raleigh, N. C.	T.				22	41	53	61	70	69	67	62	56	42	46		170.0	311.8	55	47	
Rochester, N. Y.	T.				7	10	18	36	45	45	48	36	39	20	33		88.8	227.2	30	34	
St. Louis, Mo.	T.				42	47	59	65	65	63	57	59	49	49	70		170.0	303.8	56	43	
St. Paul, Minn.	P.				26	31	44	43	39	41	42	41	35	30	33		108.4	286.7	33	33	
Salt Lake City, Utah.	P.				34	47	49	52	45	41	54	48	45	25	6		132.2	288.4	44	44	
San Diego, Cal.	P.			50	58	58	65	69	71	74	74	66	65	55			218.6	318.5	67	56	
San Francisco, Cal.	T.				12	44	55	66	68	70	67	61	49	38	13		161.4	306.5	53	46	
Santa Fe, N. Mex.	P.				57	62	71	69	74	71	70	75	64	45	36		208.5	311.5	66	56	
Savannah, Ga.	P.			50	32	46	46	48	42	46	42	47	46	31	26		137.9	320.5	48	48	
Seattle, Wash.	T.				16	18	8	17	26	30	30	20	18	13	0		54.5	276.2	20	35	
Spokane, Wash.	P.				4	7	11	9	6	0	11	16	17	9	0		35.9	270.2	9	20	
Tampa, Fla.	T.			23	35	40	56	69	69	68	71	65	48	38	46		181.6	328.7	56	52	
Vicksburg, Miss.	T.			50	44	44	51	59	67	63	68	59	59	53	50		180.0	320.5	56	50	
Washington, D. C.	P.				49	52	56	55	61	54	53	57	51	49	43		163.6	308.8	54	50	
Wilmington, N. C.	T.				20	30	46	57	65	74	75	73	69	61	49		168.4	310.2	60	56	

* All values for 23 days; the total possible and personal estimate for 31 days are 292.7 and 30, respectively. † Instrument out of order.

TABLE XI.—Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.75 in 1 hour during January, 1897, at all stations furnished with self-registering gauges.

Station.	Total duration. h. m.	Total precipitation. Inches. 1.11	Amount before excess- ive rate began. Inches.	Accumulated amounts (in inches) during periods of time as indicated.																
				5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.	140 min.	160 min.	180 min.
Atlanta, Ga.	20																	0.40		
Baltimore, Md.*																				
Bismarck, N. Dak.†																				
Boston, Mass.	5		0.33															0.28		
Buffalo, N. Y.	5-6		1.18															0.25		
Chicago, Ill.*																				
Cincinnati, Ohio	17		0.61															0.21		
Cleveland, Ohio	20-21		0.26															0.10		
Denver, Colo.	1		0.50															0.16		
Detroit, Mich.	17		0.11																	
Dodge City, Kans.†																				
Duluth, Minn.†																				
Eastport, Me.	18		1.08															0.15		
Galveston, Tex.	19	6 20	0.96	0.20	0.20	0.35	0.43	0.46	0.50	0.54	0.60	0.65	0.70							
Indianapolis, Ind.	16-17		0.67															0.27		
Jacksonville, Fla.	26-27		1.08															0.25		
Jupiter, Fla.	25-26	21 30	0.29	0.50	0.05	0.11	0.21	0.38	0.58	0.60										
Kansas City, Mo.†	20-30	34 0	3.91	3.15	0.05	0.08	0.10	0.11	0.18	0.15	0.18	0.30	0.40	0.55	0.70					
Key West, Fla.	25-26		1.09															0.32		
Little Rock, Ark.	2-3	10 0	4.69	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3.84	
Louisville, Ky. *																				
Memphis, Tenn.	16-17		1.64															0.45		
Milwaukee, Wis. *																				
Nantucket, Mass.†																				
Nashville, Tenn.	12-13		1.83															0.81		
New Orleans, La. *																				
New York, N. Y. *																				
Norfolk, Va.	13-14		0.51															0.12		
Omaha, Nebr.	12		0.82															0.12		
Philadelphia, Pa.	20-21		0.86															0.30		
Pittsburg, Pa. *																				
Portland, Me.	20-21		1.54															0.41		
Portland, Oreg. *																				
Rochester, N. Y.	4-5		0.50															0.17		
St Louis, Mo.	2		0.64															0.22		
St. Paul, Minn.	16-17		0.67															0.17		
Salt Lake City, Utah.	16		0.83															0.05		
San Diego, Cal.	14		1.62															0.40		
San Francisco, Cal.	80-81		1.08															0.17		
Savannah, Ga.	14-15		0.95															0.45		
Seattle, Wash.	24-25		0.95															0.18		
Vicksburg, Miss.	17	8 50	1.38	0.17	0.02	0.06	0.20	0.30	0.44	0.55	0.66	0.75	0.86	0.94	1.00					
Washington, D. C.	20-21		1.04															0.27		
Wilmington, N. C.	30		0.87																	

* Self register out of order. † No record, on account of snow.

TABLE XII.—*Excessive precipitation, by stations, for January, 1897.*

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		Day.
		Amt.	Day.	Amt.	Time.	
<i>Alabama.</i>						
Valleyhead	Inches.	Inches.				
		2.64				
Congress		2.88	14			
Pinal Ranch		2.63	11			
Beebranch		3.00	3			
Blackton		11.12	4.70	3		
Do.		2.75	16			
Blanchard Springs		3.20	2-3			
Brinkley		3.83	2-3			
Do.		2.75	16-17			
Camden		2.62	15-16			
Conway		3.17	2-3			
Eton		2.98	3			
Fayetteville		3.70	2			
Forrest		3.85	2-3			
Fort Smith		3.64	1-2			
Fulton		2.72	3			
Hot Springs		2.75	3			
Keesees Ferry		4.78	2-3			
Lacrosse		4.60	2-3			
Little Rock		4.74	2-3			
Lonoke		4.25	3			
Malvern		2.68	3			
Marvell		2.65	3			
Moore		14.72	7.00	2-3		
Do.		8.00	16			
Mossdale		4.93	2-3			
New Gascony		3.64	3			
Newport		4.94	2-3			
Osceola		2.77	16-17			
Pine Bluff		13.88	5.58	3		
Pocahontas		2.82	2			
Silver Springs		4.55	2			
Stuttgart		4.21	2-3			
Washington		3.72	2-3			
Wiggs		3.86	2-3			
<i>California.</i>						
Fort Ross		2.58	20			
Malakoff Mine		2.72	28-29			
Mount Frazier		4.61	13-14			
Mutah Flat		3.25	30-31			
Pilot Creek		3.23	20			
Shasta		4.90	28-29			
Sneddens Ranch		2.50	10			
Susanville		5.04	31			
Upper Mattole		3.23	28-29			
<i>Connecticut.</i>						
New London		3.63	27-28			
N. Grosvenor Dale		2.80	25			
Windsor		2.60	27-28			
<i>Florida.</i>						
Jupiter		8.59	30			
Lemon City		4.80	31			
<i>Illinois.</i>						
Alexander		3.11	2			
Atlanta		2.56	2-3			
Beardstown		4.20	2-3			
Bushnell		3.95	1-2			
Coatsburg		2.94	2			
Griggsville		5.16	2-3			
Havana		2.98	2-3			
Knoxville		3.20	2-3			
Laharpe		10.88	5.97	2-3		
Peoria		2.90	2-3			
Tiskilwa		2.74	1-2			
<i>Indian Territory.</i>						
Lehigh		5.26	1-2			
South McAlester		2.50	1-2			
Tahlequah		6.20	1-2			
<i>Iowa.</i>						
Bonaparte		2.92	2-3			
<i>Louisiana.</i>						
Bastrop		8.16	3			
Cameron		10.73	7.65	1		
Farmerville		8.81	1-2			
Lake Charles		10.95	4.00	1		
Oakridge		9.60	16-17			
Oberlin		12.20	7.00	1-2		
Do.		2.50	31			
Oxford		3.15	1-2			
Plain Dealing		2.82	2			
Port Eads		2.83	1			
Sugartown		2.85	1			
<i>Massachusetts.</i>						
Lake Cochituate		2.58	27-28			

TABLE XII.—*Excessive precipitation.—Continued.*

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		Day.
		Amt.	Day.	Amt.	Time.	
<i>Michigan.</i>						
Alma	Inches.	Inches.				
		2.97				
Gaylord		2.50				
Gladwin		3.20				
Hart		2.56				
Muskegon		4.90				
Rockland		3.60				
<i>Mississippi.</i>						
Austin	Inches.	Inches.				
		2.97				
Kosciusko		3.00				
Rosedale		2.59				
Vicksburg						
<i>Missouri.</i>						
Appleton City						
Arthur		3.52	1-2			
Birchtree		2.70	1-2			
Booneville		4.00	2-3			
Brunswick		3.86	1-2			
Cedargap		2.68	1-2			
Columbia		6.95	1-2			
Darksville		5.02	1-2			
Edgehill		3.50	2			
Emma		3.21	2-3			
Fayette		2.73	2-3			
Fulton		4.38	1-2			
Gorin		6.70	1-2			
Grovedale		2.87	2			
Halfway		10.37	8.71	2-3		
Hannibal		8.61	2			
Hastain		3.11	2-3			
Hermand		4.70	1-2			
Houston		3.78	2-3			
Houstonia (near)		4.73	2-3			
Humansville		8.19	1-2			
Ironton		8.50	1-2			
Jefferson City		5.50	1-3			
Lamar		4.00	2			
Lamonte		3.10	1-2			
Lebanon		6.60	1-2			
Macomb		6.50	2-3			
Mansfield		5.50	1-2			
Marshall		2.72	2			
Mexico		3.46	3			
Mine La Motte		2.85	2-3			
Mineral Springs		4.00	1-2			
Montreal		4.00	1-2			
Mount Vernon		4.08	2			
Neosho		3.40	1-2			
Nevada		3.00	1-2			
New Haven		6.60	1-3			
New Palestine		4.08	1-2			
Oakmound		3.55	3			
Olden		4.86	1-2			
Osceola		5.20	2			
Oto		5.60	1-2			
Palmyra		3.70	2			
Phillipsburg		4.73	1-2			
Poplar Bluff		2.80	2			
Potosi		2.60	2-3			
Rhineland		4.07	1-2			
Rolla		6.65	1-3			
Sarcosie		3.42	1-2			
Shelbina		5.70	2-3			
Springfield		4.64	1-2			
Steffenville		3.80	2			
Stellada		2.92	1-2			
Sublett		3.00	16			
Virgil City		4.15	1-2			
Warrenton		7.18	1-2			
Wheatland		2.59	2			
Willow Springs		4.00	3			
<i>Oregon.</i>						
Glenora		19.89				
Nehalem		10.43				
<i>Texas.</i>						
Arthur City		2.73	1			
Orange		3.00	1			
<i>Virginia.</i>						
Guinea		8.00	21			
Manassas		3.52	27			
<i>Washington.</i>						
Clearwater		16.56	7.46	3-4		
Lapush		11.40				
North Bend		10.07				
Tatoosh Island		12.20	3.12	5-6		